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ABSTRACT

This study investigated the association among select socio-cultural variables and sexual knowledge, attitudes, and behaviors with a diverse population of metropolitan New York community college students. The Sexual Knowledge, Attitude, and Behavior Test survey instrument was administered to 338 students between the ages of 17 and 26 in their health and physical education classes. Findings indicated significant differences in overall sexual knowledge between ethnic groups, with African-Americans and white students scoring higher than the other groups. U.S.-born students scored higher in overall sexual knowledge than foreign-born students. Differences were found across ethnic groups with respect to knowledge of HIV and contraception, attitudes towards pre-marital sex, and sources from which students obtained sexual knowledge. Significant gender differences in attitude towards pre-marital sex were found among white students only, with males holding more liberal attitudes than females. Level of maternal education was significantly related to attitudes toward pre-marital sex and the number of sexual partners in the past year. Results suggest that variables such as years in the country, level of maternal education, and level of acculturation may influence sexual knowledge, attitudes and behaviors. Sections include an introduction, literature review, methods and procedures, results, discussion, summary, and conclusions. Appendices contain a consent form and a copy of the survey instrument. (Contains 14 tables and more than 100 references.) (RDG)

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# SEXUAL KNOWLEDGE, ATTITUDES, AND BEHAVIORS OF AN ETHNICALLY DIVERSE SAMPLE OF COMMUNITY COLLEGE STUDENTS IN METROPOLITAN NEW YORK

by

Jenine De Marzo

Dissertation Committee:

Professor Barbara Wallace, Sponsor
Professor John Allegrante

Approved by the Committee on the
Degree of Doctor of Education

Date_____

Submitted in partial fulfillment of the
requirements for the Degree of Doctor of Education in
Teachers College, Columbia University

1998

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ABSTRACT

SEXUAL KNOWLEDGE, ATTITUDES, AND BEHAVIORS OF AN ETHNICALLY DIVERSE SAMPLE OF COMMUNITY COLLEGE STUDENTS IN METROPOLITAN NEW YORK

Jenine De Marzo

Research pertaining to differences in sexual knowledge, attitudes, and behaviors among adolescents and young adults has contributed to our understanding of sexuality among young people. Previous efforts at investigating these components have fallen short in that they have focused on relatively homogenous populations and have examined knowledge, attitudes, and behaviors exclusively, but rarely concurrently.

The purpose of this study was to investigate the association between select socio-cultural variables and sexual knowledge, attitudes, and behaviors among a diverse population of metropolitan community college students. This was accomplished by administering a survey instrument, The Sexual Knowledge, Attitude, and Behavior Test, to college students ($N = 338$) in their Health and Physical Education classes.

Findings indicated significant differences in overall sexual knowledge between ethnic groups ($p < .0001$). White-Americans scored higher than all other groups except African-Americans. Significant differences were found between U.S.-born students and those born outside of the U.S. ($p < .0001$). Differences in HIV and contraception knowledge was significant ($p < .001$; $p < .0001$) between groups. Haitian students scored

lower than all other students. Significant differences were found with regard to sources from which students attained sexual knowledge: friends ($p < .001$), parents ($p < .05$), other relatives ($p < .05$), and movies ($p < .05$). Differences in attitude towards pre-marital sex were significant across groups ($p < .05$). Regarding gender, significant differences in attitude toward pre-marital sex were found in the White-American group only. Attitudes towards pre-marital sex among virginal and non-virginal students were significantly different ($p < .001$), as were level of maternal education and overall sexual attitude ($p < .01$), and maternal education and number of sexual partners in the past year ($p < .05$), with education inversely affecting number of sexual partners.

Results suggest that select socio-cultural variables, years in the country, level of maternal education, and level of acculturation may influence the sexual knowledge, attitudes, and behaviors of the sampled college students. Results are discussed in terms of practical application of the findings and future research possibilities.

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J. D.

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# Chapter I

## INTRODUCTION

Good health is typically considered a trait of youth, and the majority of young people are free from serious health problems. Yet the overall morbidity and mortality rates for adolescents and young adults are very high, and continue to escalate more than for any other group (Yarber & Parillo, 1992). Many of these health problems result from specific risk-taking behaviors.

During adolescence and young adulthood, the initiation of sexual activities and experimentation with drugs, alcohol and cigarettes are characteristic of the age group. Kolbe (1990) points out the following:

> the leading causes of mortality, morbidity and social problems in the 13-24 year age group suggests that the health problems that our young people experience are largely caused by few behaviors, such as drinking and driving and sexual intercourse at a young age. (p. 44)

To some degree, most of these behaviors are considered typical and normal components of development. Unfortunately, most of these behaviors often result in an increased susceptibility to a wealth of health problems. Sexual risk-taking and the onset of sexual activity have many outcomes that have been related to the increase in morbidity and mortality; specifically, the age of first coitus, and the number of recent and lifetime sexual partners, to disease outcomes such as HIV and cervical carcinoma. The earlier the

age of first intercourse, the greater the risk of encounter with an STD/HIV-infected partner (Wyatt et al., 1997; Yarber & Parillo, 1992). The Center for Disease Control's (CDC) National Survey of Family Growth (Chandra et al., 1997) reports that the age of first coital experience for females has been occurring progressively earlier than it has in the past. The age of first non-marital sexual intercourse has been declining for males in this age group as well (Morbidity and Mortality Weekly Reports [MMWR], 1991). Teen pregnancy rates continue to escalate, and negative effects of early parenthood have been amply documented. The health, education, and future of the child and parent(s) are adversely affected, and poverty is the frequent outcome (Coker et al., 1994).

During the past three decades, researchers have broadened their view concerning this field of study. Contemporary social scientists point to a multitude of determinants to explain the age of first non-marital sexual intercourse in adolescents and young adults. These include behavioral, psychological, social, and biological factors. Traditionally, sexual behavior had been viewed as a moral issue. Recently, the staggering statistics have prompted both professionals and laypeople to take a closer look at this naturally occurring phenomenon.

Before we can understand contemporary research findings, we must look at the historical trends that have critically shaped our understanding of human sexuality. The following historical review provides a framework for examining adolescent and young adult sexuality.

## Historical Trends

Sexuality seems to be one of the few uncompromising facts of life. Theories that try to explain this complex innate function come and go, but the basic assumptions about

sexuality have remained the same over time. Most individuals view human sexuality in terms of black and white, good and evil, natural or unnatural. Historically, sexuality has been studied in terms of form and function, a naturalistic biological bias that has dominated the study of sexuality up to the nineteenth century (Brettell & Sargent, 1993; Bullough, 1994).

Aristotle, a fourth century Greek philosopher, was the most influential author on the topic in the pre-modern world. Aristotle's work on animal reproduction and anatomy has been regarded as the foundation of the science of Western sexology (Bullough, 1994; Masters, Johnson, & Kolodny, 1996). As cited in Bullough (1994), "Aristotle's Masterpiece" was the most widely used source of information about sex in the English-speaking world and was highly regarded from the seventeenth through the nineteenth centuries. Much of the information contained in this book was based on acute observation and folklore. Aristotle not only tried to explain human reproduction, he ascribed different roles for the male and female. He believed the male was the major factor in reproduction, while the female was merely a vessel designed to carry the male seed. Because of Aristotle's power and authority, his views were extremely influential and have given the science of reproduction a hierarchical connotation that still exists today (Bullough, 1994; Highwater, 1991).

During the latter part of the century, sexuality research had attempted to understand sex within the context of its broader role in the human experience (Ortner & Whitehead, 1981; Vance, 1984). Researchers like Carl Ulrichs, Richard Von Kraft Ebbing and Carl Westphal established the importance of medicalizing the study of human sexuality. A shift in focus from sexuality as a strict pathology to a social phenomenon changed the way researchers looked at this aspect of human nature (Bullough, 1994; Masters, Johnson, & Kolodny, 1986).

According to Ebing (in Bullough, 1994), the relevance of sexuality was the:

> most important factor in social existence, the strongest incentive to the exertion of strength and acquisition of property, to the foundation of a home, and the awakening of altruistic feeling, first for a person, then for the offspring, and in a wider sense for all humanity. (p. 41)

As Ebing's sentiment penetrated the field, researchers began to focus on other aspects of the human condition--those that made it possible for man to restrain the lust and desire that tempered his behavior (Hekma, 1989). It was believed that factors such as religion, law, education, and morality gave people the means to bridle their innate urges (Bullough, 1994; Highwater, 1991; Masters, Johnson, & Kolodny, 1986). Those citizens who were unable to do so were said to have an unreasonable and uncontrollable libido. These individuals essentially became the cornerstone of case studies which gave life to the science of sexology as we know it today.

Sigmund Freud also demonstrated the central importance of sexuality to human experience. Freud's prominent status is still recognized today, much of which is based on his original observations and acute ability to synthesize emerging ideas into cohesive theoretical frameworks. His innovative concepts of sexuality rested on the premise that sex was the primary force and motivation for all human behavior. "He clearly described the existence of sexuality in infants and children, expanding views expressed by other sexologists between 1880 and 1905, and formulated a detailed theory of psychosexual development" (Masters, Johnson, & Kolodny, 1986, p. 18).

Scientists such as Albert Moll, Magnus Hirshfeld, Havelock Ellis, and Iwan Bloch complemented Freud's theories and initiated a striking reversal in thinking about sexuality (Bullough, 1994). Ellis introduced the concepts of individual and cultural relativism of sex. His observations were based on the notion that sexual differences among individuals were inborn and not pathological. He supported the idea that deviations from the sexual

norm were often harmless and potentially valuable. These notions were further supported by his work. Ellis' work was basically a plea for tolerance. He urged society to accept sexual manifestations in infants and children, and pushed them to realize that sexual experimentation was part of adolescence. He was pivotal in identifying a myriad of outside factors that affected the human sexual experience. Unlike others before him, Ellis turned to history, anthropology, literature, and biology to explain various forms of sexual expression (Bullough, 1994).

Bloch supported the concept of cultural relativism. In his book Psychopathia Sexualis, volumes VI and VII, he cited that sexual perversions were found in every culture and throughout history (Hekma, 1989). He held that true understanding of sexual behavior is relative to time, place, and socio-cultural conditions (Bullough, 1994; Hekma, 1989).

Historically, there have been considerable differences of opinion among those who have studied human sexuality. However, all have converged on the phenomenon that sexuality is embedded in human nature. Biology certainly provides the pre-conditions for human sexual activity. Yet contemporary researchers look to broaden their understanding by appreciating external factors, including cultural, social, religious, and historical components that shape the human sexual experience (Brooks-Gunn & Furstenberg, 1989; Bullough, 1994; Hekma, 1991; Masters, Johnson, & Kolodny, 1986).

As an anthropologist, Margaret Meade also supported the theory of cultural relativism. Meade studied the nature of adolescence and sexuality in the early part of this century, and was one of the few researchers to focus on adolescent sexuality in an objective manner. Her research, which observed cultural and sexual behavior, began at Yale University in the early 1930s and continues today. Meade's findings were a

compilation of information ranging across many cultures from around the globe. The data were expansive and still continue to grow. Meade's research has indicated that there were many cross-cultural sexual differences. The most notable results of Meade's research are that it challenged traditional sex and gender roles, and demonstrated the diversity of human sexual expression (Bullough, 1994; Kelly, 1994).

Perhaps the most influential contemporary work on sexual behavior was conducted by Alfred Kinsey and his colleagues in the 1940s and 1950s. Early Kinsey reports focused on "Documenting increases in pre-marital intercourse since World War I" (Brooks-Gunn & Furstenberg, 1989, p. 249). This exemplified the radical changes observed in the public attitudes about sexuality. Kinsey was noted for emphasizing the physical sex portion in his research; which at the time was still quite controversial. However, he truly legitimized the science of sexology by recognizing the many facets of human sexuality. Kinsey's research efforts scoured all disciplines from anthropology to sociology, and openly debunked the medical community's dominance over the field (Bullough, 1994; Hekma, 1991).

Kinsey's studies were landmark in that they were based on a unique interview technique that had numerous checks for consistency. He was adamant about extracting and recording accurate information from the subjects he interviewed. He was clearly aware of the perils of interviewer bias, so he personally trained four colleagues and never allowed any others to assist in the thousands of interviews he performed (Bullough, 1994; Kelly, 1994). His overzealous attention to detail and the development of a meticulous coding system allowed him to interview approximately 10,000 individuals with a good degree of accuracy and statistical significance. Building on the research of his predecessors, Kinsey noted that there were class distinctions and cultural differences in many sexual practices (Bullough, 1994; Kinsey, Pomeroy, Martin, & Gebhardt, 1953).

Although these findings were not the focus of his energies, they gave impetus to subsequent studies.

Researchers William Masters and Virginia Johnson followed the dedication of Kinsey. However, they focused their efforts on developing information that would be helpful to other professionals in a clinical setting, thus better serving and educating the public (Bullough, 1994; Kelly, 1994; Masters, Johnson, & Kolodny, 1986). Their practice-oriented research was viewed as therapeutic in nature and they strove to "improve the methodology of therapeutic approach to sexual inadequacy" (Bullough, 1994, p. 196). As a result, new professions emerged such as sex therapists, sexual social workers, and sexuality counselors. These new professionals were found outside the traditional area of medicine and consisted of nurses, psychologists, and social workers (Bullough, 1994; Masters, Johnson, & Kolodny, 1986).

The efforts of Kinsey and Masters and Johnson prompted the emergence of professional organizations that attempted to focus on regulating these services. The advancement of sexuality education via organizations like the Sex Information and Educational Council of the United States (SIECUS) and the development of the American Association of Sex Educators, Counselors and Therapists (AASECT) were a direct result of the work completed by these contemporary researchers (Bullough, 1994).

This brief historical tour of the study of human sexuality serves to highlight how, when, where and why this science has so evolved. It also serves to emphasize the glaring research omissions, particularly involving adolescents and young adults.

## Contemporary Research: Adolescent Sexuality

National survey data concerning adolescent sexuality issues were not collected until 1971 (Brooks-Gunn & Furstenberg, 1989). Until that time, very few laudable studies in the late 1960s and early 1970s focused solely on the adolescent sexual experience (Kelly, 1994).

Many of the findings pertaining to this population have been couched in political and economic terms. As a result of the increasing number of teen pregnancies that occurred during the 1960s and 1970s, teenage fertility issues became a matter of concern for many who previously chose to ignore this domain completely. As societal and individual costs of adolescent sexuality peaked, so did interest in identifying social strategies for understanding and coping with this issue (Brooks-Gunn & Furstenberg, 1989; Darabi & Asencio, 1987; Miller & Olson, 1988; Stock et al, 1997). The fact that this population was virtually ignored reflected our nation's ambivalence toward adolescent sexuality (Brooks-Gunn & Furstenberg, 1989).

Pre-marital sexuality has been an important area of research during the past few decades. Yet like most research, it has had severe limitations. For example, most studies have emphasized samples that have been demographically homogenous (Darabi & Asencio, 1987; Miller & Olson, 1988; Zelnik & Shah, 1983). Also, the research has often utilized single-sex samples (Pleck, Sonestein, & Ku, 1991). Most of the nation's largest research institutions, both public and private like the Centers for Disease Control and the Alan Guttmacher Institute (AGI), persist on utilizing traditional grouping variables when conducting research. These groupings include race, age, gender, and socio-economic status. Demographic breakdown in this fashion does provide relevant data; however, it fails to identify other significant characteristics and potential circumstances that may

influence sex-related health outcomes (Wyatt, 1994).

Large-scale research initiatives such as the National Longitudinal Survey of Youth (NLSY), the National Survey of Families and Households, and the Youth Risk Behavior Survey (YRBS) frequently point to racial identification as the primary defining characteristic of adolescent and young adult populations (Armstrong, 1995; Cambell, Peplau, & DeBro, 1992). These samples are generally analyzed by sub-groups based on race and discuss their relative risk of specific behaviors.

The Office of Management and Budget has identified Americans in five broad racial categories: American Indian or Alaskan Native, Asian or Pacific Islander, Black, White, and Other. Native Americans can belong to a tribal community with as little as one-sixteenth percent ancestry. Asians and Pacific Islanders are made up of as many as 11 nationalities of ethnic origins. Individuals who classify themselves as Black or White are most often composed of multi-racial and multi-ethnic backgrounds. Hispanics often identify themselves in the "Other" category. Recent census information reveals that this "Other" category is the fastest-growing racial group (Armstrong, 1995; Brewster, 1992; Wyatt, 1994).

The focus of this project is to address two areas that have been left out of past projects: (1) the area of sexuality that has been too often overlooked--adolescent and young adult sexuality, and (2) the identification of recently emerging sub-populations. This study will identify sub-populations that have not been represented in past research projects. Differences in knowledge, attitudes, and behaviors will be assessed between groups on the basis of contextual characteristics that include age, gender, ethnic origin, number of years in the USA, socio-economic status, religion and religiosity. Utilizing such demographic data will better serve this project as well as social scientists who truly wish to identify their research populations (Armstrong, 1995; Brewster, 1992; Cambell,

Peplau, & DeBro, 1992; Wyatt, 1995).

In sum, contemporary research has suggested and history has dictated that to better serve, educate, and provide an impetus for change, adolescents and young adults must be studied in a way that resembles the interdisciplinary nature of the collective history of sexology. By addressing the varied contextual factors, the sample population and their varying levels of knowledge, attitudes, and behaviors can be identified with greater clarity.

## Guiding Theory for This Study

This idea of studying human sexuality from a more dynamic standpoint resounds in a fairly recent theory that has induced the scholarship on human sexuality to undergo a radical transformation. The Social Constructionist Approach, as popularized by Michel Focault (1977) and others, opposes commonly held biology-based approaches. Focault argues that there is a human potential for consciousness, behavior, and physical experience that is developed by social forces which define, regulate, and categorize human behavior. Similar to the history of human sexuality, this theory is based on forms of inquiry indebted to intellectual trends of varying nature (Gergen, 1985). Its emphasis is on the individual's active role in his/her sexuality. This post-modern view of sexuality is used as a guide in directing this research project and will be discussed further in the following chapter.

## Statement of the Problem

This study focuses on three broad problems that face society today. This investigation will examine these problems by focusing on the association between socio-cultural variables and sexual knowledge, attitudes, and behaviors among a population of

metropolitan adolescents and young adults. These problems have been implicated in the Healthy People 2000, National Health Promotion and Disease Prevention Objectives (1990), as stated below:

> 5.4. Reduce the proportion of adolescents who have engaged in sexual intercourse to no more than 15% by age 15 and no more than 40% by age 17. (p. 98)
>
> 5.6. Increase to at least 90% the proportion of sexually active, unmarried people aged 19 and younger who use contraception, specifically combined methods of contraception that both effectively prevent pregnancy and provide barrier protection against disease. (p. 98)
>
> 18.4. Increase to at least 50% the proportion of sexually active, unmarried people who used a condom at last sexual intercourse.

These objectives provide the direction for this research project. This project will explore whether socio-cultural factors are related to differences in sexual knowledge, attitude, and behavior. This study will identify the sources from which sexual knowledge is gleaned and may provide further useful data concerning age of first intercourse, sexual abuse, contraception usage, sexually transmitted disease, and pregnancy prevention. The study may also provide information which can be utilized to better determine future educational initiatives. This information can be used to better understand the emerging diverse adolescent and young adult population. This new data can be the basis for the development of educational materials that are more sensitive and relevant to populations that have failed to be identified or have otherwise been overlooked in previous research initiatives.

## Research Questions

The scope of this project may be clarified by asking the following research questions:

1. What is the level of knowledge about sexual practices and related issues (HIV, STD's and contraception) among a sample of metropolitan adolescents and young adults?
2. From what sources of information do these adolescents and young adults acquire their knowledge about sex?
3. What are the attitudes (liberal vs. conservative) toward pre-marital sex?
4. Are these students sexually active? At what age do they commence sexual activity? Do they utilize contraception and for what reason: pregnancy or STD prevention? Is there a history of pregnancy? Lastly, what has been the nature of their sexual experiences (number of partners) in the past year?
5. In which stage of change (action, action with slips/relapse, or maintenance) are adolescents and young adults in the sample to be found with respect to HIV and STD prevention (condom use) and pregnancy prevention (contraception use)?
6. What is the relationship between demographic variables (sex, ethnicity, religiosity, maternal education) and attitudes towards sexual behaviors and sexual practices (pre-marital sex, number of past sexual partners), and related issues (coercive sexual experiences)?

## Rationale

This section will discuss the rationale for the research. The intention is to describe the basis for the objectives of the research questions.

Prior to the 1940s, information concerning sexuality came primarily from direct experience, peers, and minimally from the family (Moran & Corley, 1991). The lack of organized efforts to educate young people for sexual experiences increased the likelihood that they would learn through experimentation. By the late 1940s, educational efforts

became an option for a limited number of schools around the country (Moran & Corley, 1991). Although these early hygiene classes focused only on personal health habits and straight anatomy, it was a beginning. Today, health education in the classroom has taken on greater responsibility than it has in the past. Not only is there greater opportunity for more students to benefit, but the curriculum topics have broadened considerably. Moran and Corley (1991) found the following:

> Most of these programs have attempted to impart knowledge or influence attitudes about sexuality. Specifically, the focus of these efforts often has been to increase the young person's skill in making decisions about initiation of sexual intercourse, contraceptive use and pregnancy resolution. (p. 857)

This has not occurred without controversy. While sexuality classes have shown to be effective in increasing knowledge, some critics are concerned that it promotes early sexual activity (Kirby, 1984; Moran & Corley, 1991; Zelnick & Kim, 1982). Yet several studies have found no association between the probability of early sexual activity and having attended sex education courses (Cooksey, Rindfuss, & Guilkey, 1996; Kirby, 1984; Marsiglio & Mott, 1986). Those students who have attended sex education classes are often less likely to experience pregnancy and more likely to use contraceptives (Zelnik & Kim, 1982).

There does appear to be broad support for sex education in many communities. Harris (in Moran & Corley, 1991) reported that over 85% of the American public support sex education in the schools (p. 858). By 1990, all but four states mandated some type of sex education within their schools (Cooksey, Rindfuss, & Guilkey, 1996). However, the extent to which this is provided and the depth of the curriculum varies greatly from state to state.

Considering that the majority of school-aged students receive some type of sex education by the time they reach high school, the level of knowledge concerning sexual

practices, HIV, STD's and contraception deviates considerably (Goodman & Cohall, 1989). According to the 1993 Youth Risk Behavior Surveillance Survey (YRBSS), nationwide, 86.3% of all students have been taught about AIDS/HIV and STD infection in school (CDC, 1996). Yet this statistic may not truly reflect levels of sexual knowledge. Goodman and Cohall (1989) report that 84% of the New York City students (n=196) they surveyed correctly identified intravenous drug use as a mode of transmission, 89% identified blood products, 74% identified anal sex, 56% knew vaginal fluids could transmit the virus, and 59% identified oral sex as a possible means of transmission. Yet there were many misconceptions: 52% incorrectly identified donating blood as a means of transmission, 23% identified saliva, 14% identified toilet seats, and 11% thought transmission could occur by sharing utensils (Goodman & Cohall, 1989). Similar findings were reported by Strunin and Hingson (1987).

A total of 85% of students knew that by using condoms they could protect themselves from AIDS and other STD's. However, only 34% stated abstinence and 21% incorrectly stated the pill as a way to reduce risk of infection (Goodman & Cohall, 1989). Masiglio and Mott (1986) found that "teenagers who have previously taken a sex education course are significantly more likely to use effective contraceptive methods (e.g., pill, condom, diaphragm, IUD) than are teenagers who have never taken a course" (p. 159). A full 73% of students had taken a course, as compared to 64% who had not (n=12,686). It was found that there was a significant difference among White women but not among Blacks or Hispanics with regard to those who have taken a course and those who did not (Marsiglio & Mott, 1986).

Gender differences have also been documented. Pepe, Sanders, and Symons (1993) found that among the college freshman they studied (n=531), 71% of the women "Always" used some method of birth control; far fewer of the men (54.5%) exhibited this

behavior (p. 22). More women used a condom to prevent against disease (79%), whereas only 43% of the men did so. Overall, it appeared that women were more knowledgeable concerning alternative contraceptive methods than their male counterparts (Pepe, Sanders, & Symon, 1993).

Much of the research to date has focused on sexual attitudes and behavior, whereas levels of knowledge among adolescents and young adults have not shared the same attention. Generally, individual institutions assess this internally and results are rarely published. One primary reason for this phenomenon is that is it difficult to generalize such information to populations outside the institution. It seems that a national initiative focused on this issue, level of sexual knowledge, is sorely needed.

National sample surveys have reported that the age of first non-marital intercourse has decreased in the past few decades (Coker, Richter, Valois, Mckeown, Garrison, & Vincent, 1994; Miller & Olsen, 1988; Zelnik & Shah, 1983). More than half of females and three-fourths of males have had intercourse before their 18th birthday (AGI, 1994; CDC, 1993). In the 1950s, just under one-quarter of females and less than one-half of males fell within this category (AGI, 1994). Traditionally, more widespread sexual activity has been associated with males than with females. However, the gap seems to be diminishing slowly (AGI, 1994; Coales & Stokes, 1986; Miller & Olsen, 1988).

According to a recent report by the CDC (1995), nationwide, 53% of students in grades nine through twelve reported that they have had sexual intercourse. This percentage would be significantly higher had they included students at the junior high level, which is when most of these students became sexually active (AGI, 1995). The percentages were lowest among male students in Hawaii and among female students in Nebraska--42% percent in both cases. The percentages were highest for males in South Carolina and for female students in Mississippi--72% and 66%, respectively (CDC,

1995).

Across the country, 19% of students had four or more sexual partners during their lifetime. In every state, more males than females reported having had four or more partners. More than half of these sexually active students reported having had sexual intercourse in the preceding three months of the survey (CDC, 1995).

The early age of first intercourse has been implicated in many studies as an indicator of future problem health behaviors. According to the YRBSS (CDC, 1995), those individuals who have had sexual intercourse at an early age were more likely to carry a weapon to school, engage in fighting behavior, and experiment with cigarettes and alcohol. These students were also more likely to have a greater number of sexual partners, be less likely to use condoms, be significantly more likely to become pregnant or cause a pregnancy, and be more likely to be infected with one or more sexually transmitted diseases (CDC, 1995; Coker, Valois, Mckeown, Garrison, & Vincent, 1994; Rosenthal et al., 1997). Disparities between Whites and Blacks and age of first intercourse have been well documented and can be found in any national survey (AGI, 1994; Harris, 1986; Zelnick & Shah, 1983). Research concerning other minority populations has been completed to a small extent.

According to AGI (1994), one of the leading research institutions on the subject, 81% of Blacks, 60% of Hispanics, and 57% of White males have had first intercourse between the ages of 15-19 years: for females, the percentages are 59%, 45% and 48%. This institution uses these broad groups to identify their study populations. The YRBSS, conducted by the CDC in 1993, reports that more than 53% of all adolescents in the U.S. have had sexual intercourse before they graduate high school. The YRBSS, like AGI, utilizes the traditional grouping strategy. However, smaller studies seem more likely to focus on other minority or sub-populations. For example, Chan (1994) found that only

19% of Asian students (from an all-Asian sample) in the same age group had non-marital intercourse within the same timeframe. These references confirm the fact that contemporary studies fail to realistically reflect the population in today's diverse society.

Essentially, comparisons of sexual behavior have been impeded by the lack of sound and precise data on cross-cultural and ethnically diverse populations (Brewster, 1994; Irvine, 1994; Wyatt, 1994). This research will look at a diverse population of adolescents and young adults ages 17 through 24, more closely documenting their ethnic and cultural identification.

The high teenage sexual activity and pregnancy rates in America are often attributed to the lack of effective communication of sexual information. According to Harris and Associates (1986), young people get most of their sexual information from the following sources: (1) parents, (2) friends, (3) television or movies, (4) books or magazines, and (5) medical professionals.

Numerous studies indicate that current, formal institutionalized sex education programs are not universally available and are not significantly lowering sexual activity and pregnancy rates to those who receive them (Mueller & Powers, 1990). School programs are often limited in scope and duration, typically focusing on anatomy and physiology. Most students receive just five hours of instruction on birth control and six hours on STD prevention and education from grades 7-12 (AGI, 1994).

Other studies indicate that informal parent-child sex education is also ineffective in many cases (Mueller & Powers, 1990; Noller & Callan, 1990; Poppen, 1994; Tucker, 1989). It seems that gender plays a large role in the parent-child sexual communication dyad. Mothers are more likely to be a source of information to both sons and daughters. Daughters often report that their mothers are the primary information source. However, this does not hold true across ethnicities (Tucker, 1989). African-American adolescents

and young adults are more likely to make this claim than students in other ethnic groups (Tucker, 1989).

Public information campaigns on issues like AIDS knowledge, pregnancy prevention, and STD prevention have improved over the last decade. The national distribution of the pamphlet "Understanding AIDS" by the Surgeon General was a major effort to disseminate sexual information to this very population (Poppen, 1994). However, the effectiveness of this campaign and others like it is virtually unknown.

Television and movies provide a powerful medium and young people are especially susceptible to it. The media's impact on adolescent attitudes and behaviors has been well documented. This visual entertainment gives young people their first glimpse of the adult "real world" long before they have any experience of it for themselves. It teaches them gender roles, conflict resolution, and decision-making strategies, and provides them with a myriad of ideas concerning courtship patterns, sexual intimacy, and sexual gratification (Strasburger, 1995).

Whether these strategies are truly effective is not really certain. Despite this uncertainty, it is of vital importance to determine the sources of information to which young people are turning for sexual information. Differences among ethnic and cultural groups need to be assessed.

Research that ignores the saliency of ethnicity and culture renders invisible the experience and attitudes of the majority of the population in question (Irvine, 1994). Typically, research has documented the differences in attitudes among Blacks and Whites, to the exclusion of other groups. This study will look to expand on this point through the inclusion of a number of socio-cultural groups.

Sexual attitudes that may be characterized as liberal or conservative will be determined in relationship to various demographic variables. For example, despite a

generally liberal attitude towards non-marital coitus in contemporary society, the meanings attached to sexual experience are dictated by attitudes towards this behavior. Attitudes may vary from group to group. Early sexual behavior may reflect rebellion or deviance for some. For others, it may be a natural transition toward adult status. Still for others, it may be seen as a way of attaining social competence and peer acceptance (Alexander, Ensminger, Kim, Smith, Johnson, & Dolan, 1989).

Roche and Ramsbey (1993) conducted a 5-year follow-up study on pre-marital sexuality that focused on attitudes and behavior by the dating stage. Their findings revealed that young adult females who attend religious services regularly had more conservative attitudes toward non-marital sexuality. Males held more permissive attitudes than their female counterparts overall. Yet those males who attended religious services regularly were more likely than males who were not more conservative. Findings concerning cross-cultural differences could not be attained due to the homogeneity of the sample (Roche & Ramsbey, 1993).

This study will further elucidate the range of differences in attitude towards sexual intercourse and sexual experience between adolescents and young adults of different ethnic origins.

Generally, the younger a sexually experienced female adolescent is, the more likely she is to have had involuntary sex. Some 74% of women who had intercourse before age 14 reported having done so involuntarily (Moore, Nord, & Peterson, 1989). These data directly challenge expectations that these young people can take responsibility for using contraceptives to prevent pregnancy and STD's. Those individuals who are victims of sexual abuse or coercive intercourse have been noted to have increased difficulty practicing protective behaviors (AGI, 1995; Grimley & Lee, 1997; Wyatt et al., 1997). Mosher and Horn (1988) report as follows:

> Only seventeen percent of young women who ever had intercourse make their family planning visit before first intercourse, and ten percent make their first visit in the same month as first intercourse. For the remaining seventy-three percent of women, the median delay between first intercourse and first visit is twenty-three months. (p. 33)

In addition to these startling data, AGI (1994) reports that a sexually active adolescent using no contraceptive over the course of a year has about a 90% chance of becoming pregnant. The chances of acquiring a sexually-transmitted disease may even be essentially greater. The likelihood of both outcomes may vary, depending upon a number of demographic variables.

Condom use by currently sexually active adolescents across the country averaged 53% at time of last intercourse, and 18% used birth control pills at last sexual intercourse (CDC, 1995). The older the individual is, the more likely they are to use contraception at first intercourse and at subsequent sexual encounters. The prevalence of condom use at first intercourse has been rising since the 1980s, across all ethnic groups and income levels (AGI, 1994). However, Forrest and Singh (1990) found that "white and higher income teenagers are more likely than others to use condoms at first intercourse" (p. 209).

Most sexually active teenagers try to prevent pregnancy and most using contraceptives succeed. Nevertheless, one million adolescent females become pregnant each year (AGI, 1994). According to AGI (1994), "pregnancy rates among sexually experienced teenagers have declined substantially over the last two decades, but because the proportion of teenagers who are sexually active has grown, the overall teenage pregnancy rate has increased" (p. 43).

African-Americans have a higher pregnancy rate than their Hispanic and White peers (AGI, 1994). The higher rate among Blacks is only partly due to the fact that they are more likely than Whites to be sexually experienced (AGI,1 994, p. 42).

The way in which adolescents and young adults resolve their pregnancies may also differ by age, income, ethnicity, and religiosity. For example, nearly half of all White adolescents with unintended pregnancies choose to abort, as compared to less than half of those African-American and Hispanic adolescents (AGI, 1994).

Other variables like family stability greatly influence sexual behavior among young people. Those adolescents living with intact families elicit less permissive sexual attitudes and behaviors, as do those who come from families of higher socio-economic status (AGI, 1994; Coker, Richter, Valois, McKeown, Garrison, & Vincent, 1994; Miller & Olsen, 1988).

Religious participation and church attendance have been proven to be inversely related to non-marital intercourse among adolescents and young adults (Coker, Richter, Valois, McKeown, Garrison, & Vincent, 1994; Luster & Small, 1997; Miller & Olsen, 1988).

Levels of acculturation for those not born in the United States, for example, number of years in the country and sexual behavior, are characteristics that have not been researched within the adolescent and young adult population. This study will provide such information so that it may be utilized as a baseline for future research initiatives.

## Definition of Terms

Adolescent refers to individuals from age 13 through 19 years, most of whom are students attending high school or college.

Young adult includes individuals aged 20 through 24, which represents students enrolled in college.

Ethnic and cultural origin refers to distinct categories that reflect ancestral history and include African-American, African-Caribbean, Asian (Chinese, Japanese, and

Korean), Haitian, Hispanic/Latino, White-American, and Other. This also reflects country of birth.

First non-marital sexual intercourse is the age at which sexual intercourse has occurred for the first time outside of marriage. This is also referred to as first pre-marital sexual intercourse.

Attitudes are the personal judgments, opinions, and points of view regarding non-marital sexual intercourse and may be assessed for on degree of liberalism and conservatism.

## Delimitations of the Study

This study is delimited by the researcher in several ways. First, the decision to use a convenience sample of college students in the New York metropolitan area will limit the ability to generalize findings outside of this area. Second, this sample was selected from a public institution. Those students who are enrolled in private educational settings may bear different characteristics and, therefore, will not be represented by this sample population. All participants were English-speaking. Alternate versions of the instrument were not made available. Lastly, the study has been delimited to heterosexual intercourse, thus excluding any homosexual activities. All of these delimitations restrict the ability to generalize from the results.

## Limitations of the Study

The voluntary nature of the sampling procedure will limit the results of the study. It is possible that the students who chose not to participate or were not present may be significantly different from those that did participate. The study is also restricted by the fact that all participants were surveyed in health or physical education classes. Perhaps

students in these classes may be different than those in other disciplines. Students found in other classes may have dissimilar attitudes concerning this topic. A third limitation may be associated with the nature of the physical environment in which the survey was distributed. Students in a classroom environment may feel obligated to participate, despite the fact that steps were taken to prevent this feeling. Lastly, students may believe that the results of the survey will have an influence on their class grade, despite being told the contrary.

## Summary and Overview of Remaining Chapters

In sum, Chapter I has introduced the problem of early sexual involvement among adolescents and young adults and sexual risk-taking behavior. Through a brief review of the history of the study of sexology, the need for further research of adolescent and young adult sexuality has been asserted. The importance of identifying variables that may be associated with the impetus for non-marital sexual intercourse and sexual risk-taking behavior has also been emphasized.

Chapter II presents a thorough review of the literature. Chapter III gives a detailed description of the methodology utilized in attaining the data. Chapter IV presents the results of the statistical analysis of the data, and Chapter V provides a discussion of the implications and conclusions.

# Chapter II

# LITERATURE REVIEW

This chapter provides a review of the literature in four specific areas. These include a review of the literature covering the following: (1) non-marital sexual behavior, its correlates and consequences, as illustrated via three leading national research efforts; (2) attitudes (liberal vs. conservative) towards various sexuality issues; (3) the Social Constructionist Theory and how it relates to sexual knowledge, attitudes, and behaviors; and (4) Relapse Prevention (RP), the Transtheoretical Stages of Change Theory, and Motivational Interviewing (MI), as they relate to adolescent and young adult sexual behavior. These four areas will provide further justification for the critical need for the present study within an expanded socio-cultural context.

## Non-marital Sexual Intercourse: Correlates and Consequences

This section will discuss the correlates and consequences associated with non-marital sexual behavior. The information will be presented via three national research efforts.

### AGI Research Findings

Sex and America's Teenagers, written by the Alan Guttmacher Institute (AGI, 1994), is one of the latest research reports on adolescent and young adult sexuality. This report reflects 10 years of research by the institute and cooperating agencies, and 2 years

of direct research by AGI staff. This report focuses its efforts on those individuals who fall between the ages of 13-24. AGI estimates that the information provided in this document reflects over 100,000 participants. The fact that AGI isolates its efforts to this group is commendable, due to the fact that few non-profit agencies have the expertise and or the experience to do so.

According to the AGI, the average age of first intercourse among adolescents and young adults is declining (AGI, 1994). In 1982, 19% of unmarried women aged 15 had intercourse; in 1988, it was 27%. In 1979, 56% of unmarried men aged 17 living in metropolitan areas had intercourse; in 1988, the figure rose to 72%. As of 1994, AGI reported that 56% of young women aged 15-19 and 73% of young males in the same age group had sexual intercourse. These statistics suggest that this population is increasingly sexually active.

Early coitus has been linked to many negative health consequences. These consequences are experienced more often by Blacks and Hispanics than by their White counterparts (Chandra et al., 1997). These differences are largely due to the fact that Blacks and Hispanics are more likely to come from a lower family income status (AGI, 1994; Chandra et al., 1997). A full 50% of those individuals coming from low-income families are more likely to have first coitus before age 16; this is especially true for Black males. The same is true for Black females, but the age is generally one year later. Adolescents who engaged in other high-risk activities such as drinking alcohol and drug use were more likely than others to be sexually active at younger ages. Individuals in the 14-15 year old range were more likely to have had intercourse if they were involved in drinking and drug use. A full 87% of those who utilized marijuana regularly (six times or more in the past 30 days) had sexual intercourse, as compared to only 36% of those who did not smoke marijuana at all. Among regular cigarette smokers, 69% had sexual

intercourse by age 14, as opposed to 31% who did not smoke (AGI, 1994).

Those young people who had sexual intercourse at a young age were more likely to practice serial monogamy, which is a pattern of behavior in which both partners are monogamous until their relationship breaks up. However, intercourse was resumed in the next relationship. Women who were sexually active moved quickly to the next partner. A majority (55%) of those females aged 15-17 years had two or more partners; 13% of these girls had as many as six partners. Young men reported having more partners than women. This was due to the earlier age at which most men began sexual intercourse (AGI, 1994).

Two-thirds of adolescents used some form of birth control at first intercourse, usually the male condom. The older the individual was at first intercourse, the more likely they would use contraception. Whites and those coming from high-income families were more likely than Blacks or Hispanics to use contraception at first intercourse. The prevalence of condom use among females between the ages of 15-19 jumped from 23% to 48% between 1982 and 1988. This increase was experienced across all income levels and ethnic groups. Condom use and overall contraception and its effectiveness in pregnancy prevention varied in terms of age, income level, and racial/ ethnic group. Youth, lower-income Blacks, and Hispanics experienced increased likelihood of unintended pregnancy (AGI, 1994).

Approximately 65% of all new sexually transmitted diseases (STD's) annually are attributed to young people under the age of 24. This accounts for nearly seven million new cases of STD's each year. One out of every five cases of acquired immunodeficiency syndrome (AIDS) that is diagnosed in the United States occurs among those aged 20-29. The suspected incubation period between human immunodeficiency virus (HIV) infection and a diagnosis of AIDS is 10 years; thus, a great number of these young adults were

infected during their teenage years (CDC, 1993).

AGI (1994) reported that Blacks and Hispanic females were twice as likely to become pregnant than White females. Some 21% of these White females will be pregnant by age 20 and 40% of those Black and Hispanic females will become pregnant by age 18.

The strength of this research report rests on the fact that AGI looks to report the whole story behind teen sexuality. Utilizing an approach that identifies the various needs of today's young people, it strives to understand the challenges facing this population and the impact of those challenges. The report looks at the changing demographics of the United States today, and examines the possible influences that these changes have on the population.

However, one limitation of this report is that populations are condensed to just three ethnic groups, White, Black, and Hispanic. AGI reports that sub-populations are condensed because most of the surveys are not large enough to provide reliable data. Another limitation of this report is that some of the information was adapted from studies done by outside research agencies; the data were then re-tabulated and presented in an abbreviated format in the report.

The Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS), conducted by the Centers for Disease Control and Prevention (CDC), has been utilized since 1990 on a bi-annual basis to assess the prevalence of behaviors that influence health. Progress towards achieving 26 of the 111 national health objectives that focus on adolescents is also measured. The most recent (with available results) survey was completed in 1993 (February through May) and reports on a nationally representative sample of students in

grades 9-12. At the time of this writing, the 1995 results were not available. Six categories of behaviors that lead to increased mortality and morbidity are surveyed. Category four looks at sexual behaviors that contribute to unintended pregnancy and STD's, including HIV (MMWR, 1995).

The results of the 1990 and 1993 YRBSS support those findings outlined in the AGI report, with a few exceptions. The YRBSS, in general, presents its findings in terms of those behaviors that effect overall health; thus, it does not limit its scope to sexuality issues.

The 1990 YRBSS report found that of all students (n=11,631) in grades 9-12, the median age of first non-marital intercourse was 16.1 years for males and 16.9 years for females. A full 33.5% of male students and 20% of female students had first coitus before age 15. A total of 64.8% of male students and 52.4% of female students had intercourse before their seventeenth birthday. Those students who had multiple partners (four or more) were more likely than those with fewer partners to have used a condom at last intercourse within the last three months (MMWR, 1991).

Of all students in grades 9-12, 1.5% reported intravenous drug use (IDU). Male students were more likely than females to have done so. The relationship between IDU and sexual experience is that those students who had four or more partners were significantly more likely to report IDU (5.1%) than those students with fewer sexual partners (MMWR, 1991).

The YRBSS 1993 (n=16,296) findings showed that, nationwide, more than half (68.3%) of all students had sexual intercourse by grade 12. Black, Hispanic, and ninth-grade males were more likely than their female counterparts to have done so. Black males and females (89.2% and 70.4%) were more likely than White males and females (49.3% and 47.4%) and Hispanic males and females (63.5% and 48.3%) to have engaged

in sexual intercourse (CDC, 1995).

Among female students, the likelihood of having sexual intercourse increases from grades 9-12; male prevalence increases significantly from grades 10-12 (CDC, 1995).

The AGI report suggests that at each age between 12-19, the proportion of young men who report having had sexual intercourse approximately equals that of females one year older (AGI, 1994). It is not certain whether these differences reflect the trend that young men tend to over-report experiences and women tend to under-report them (Smith, 1988).

The percentage of students, nationwide, who had multiple partners (four or more) during their lifetime was 18.8%. Black and Hispanic male students were more likely than their White and female counterparts to have had multiple partners. Black females were more likely than Hispanics and Whites, males and females, to have done so. The number of sexual partners increases with age, and was found to be more pervasive in grades 11 and 12 (USDHHS, 1993).

A total of 37.6% of students nationwide had sexual intercourse three months prior to the survey (US DHHS,1993). Among those currently sexually active students, 52.8% reported that they had used a condom at last intercourse. Across all ethnic and grade sub-groups (excluding ninth grade), male students were more likely to report using a condom. White and Black females (46.1% and 47.8%) were significantly more likely than Hispanic females (36.9%) to have used a condom at last intercourse. Females in grade 9 (59.2%) reported more frequent condom use than those females in grade 12 (41.2%) (USDHHS, 1995).

The YRBSS questionnaire has been used and referred to as one of the leading sources of information concerning health risk behaviors and adolescent students. Many

states, cities, and regions utilize this tool to monitor adolescent behavior. Unfortunately, few reports have been published to explain its psychometric properties. Brener, Collins, Kann, Warren, and Williams (1995) examined the reliability of the instrument, specifically, the reliability of adolescent self-reports across the entire range of topics measured by the YRBSS. They pointed to the use of convenience samples and the fact that all information gathered was obtained from the self-report instrument. They also noted that samples of convenience decreased the external validity of the sample data. Utilization of self-reporting techniques will also decrease the external validity (Brener, Collins, Kann, Warren, & Williams, 1995).

As stated below, Brener et al. (1995) found that

> examination of the prevalence rates from the total sample at time 1 and time 2 reveals strikingly similar estimates. This finding is important because the YRBS is used primarily to characterize levels of risk for large populations of youth sampled from school districts, states, or the nation. The questionnaire is not used for individual diagnosis. Because of the intended use of the YRBSS, the consistency or risk estimates for the group as a whole may be a more appropriate measure than the reliability of individuals' responses. (p. 579)

Brener et al. (1995) also noted another "fundamental weakness in health behavior assessment is the use of single items to measure separate and distinct constructs (tobacco, alcohol use, weapon carrying, etc.)" (p. 579).

Lastly, limiting the survey to only those students enrolled in high schools across the country fails to reflect the disenfranchised youth, students who are dropouts or those that attain their education via alternative means.

The National Survey of Family Growth

The National Survey of Family Growth (NSFG) most closely resembles the objectives of this project. Both attempt to examine the variations among sexual behavior and attitudes across socio-cultural groups utilizing demographic and contextual variables.

The NSFG was carried out by the National Center for Health Statistics (NCHS) of the Department of Health and Human Services. Surveys have been completed by this agency in 1973, 1976, 1982, 1988, and 1995.

The results from the three most recent rounds of the NFSG (spanning the early 1980s to the mid-1990s) will be examined. The analysis is based on data obtained from the 1982 survey of 7,900 women aged 15-44 years; the 1988 survey from among 8,500 women; and the 1995 survey of 10,847 women of the same age.

Cooksey, Rindfuss, and Guilkey (1996) illustrate a number of changes that occurred during the documented span of time. These changes had the potential to alter the context within which adolescents and young adults' sexual decision-making occurred. These issues included the increased media attention to the rise in adolescent pregnancies, reduced governmental funding to reproductive clinics, and increased attention to the AIDS crisis.

During the 1980s, teen pregnancy developed into a media-charged issue. Several national periodicals ran feature stories on this issue, as did several television news programs. All of this transpired in the shadow of the Reagan-era "Just Say No!" campaign promoting abstinence (Cooksey, Rindfuss, & Guilkey, 1996). Unfortunately, the proportion of adolescents and young adults who experienced unwanted pregnancy continued to rise (Forrest & Singh, 1990).

By the middle of the 1980s, governmental funding for family planning services were cut by about one-third. This cut reduced clinic sites, hours of operation, and limited contraceptive methods offered (Cooksey, Rindfuss, & Guilkey, 1996). These cuts were not aimed at any particular population, yet they inadvertently affected those in the greatest need of the services provided, young people and the economically disadvantaged.

Adding another dimension to this sequence of events, it became increasingly obvious that AIDS was a deadly disease for which there was no cure. The fear of AIDS was a major element in spurring interest and concern in sex education in schools across the country (Rosoff, 1989). The number of states that required sex education in schools rose considerably as a result. By the end of the 1980s, the number of school-based clinics also increased significantly. This not only gave students easier access to condoms but also prompted policy makers to get in step with much needed progressive campaigns and educational curricula that focused on sexuality issues (Cooksey, Rinfuss, & Guilkey, 1996; Forrest & Singh, 1990).

The NFSG illustrates, with regard to these societal trends, the varied effects across socio-cultural groups; the results of which will be summarized here. Religion, mother's education, and race were variables of key interest and significance; respondents' age, age at menarche, residence, and family background were also of substantive interest.

Catholics and Protestant fundamentalists were found to begin intercourse later and were less likely to use contraceptives at the time of first intercourse. Adolescents and young adults of well-educated mothers were more likely to postpone first intercourse and use contraceptives when commencing sexual activity, and utilize contraceptives more consistently when doing so. Evidence pointing to the reduction in the disparity between Whites and non-Whites was present with regard to the delay in first intercourse and the use of contraceptives, specifically condoms (Cooksey, Rindfuss, & Guilkey, 1996; Forrest & Singh, 1990).

Among females aged 15-19 years, the 1988 survey revealed that 51% of these females had non-marital sexual intercourse. The 1995 survey reported a slight drop in this behavior (50.4%). Age at menarche was utilized as an indicator of physical maturation and had no significant effect on non-Whites in terms of age of first intercourse

or contraceptive usage. However, the later occurrence of menarche was significantly related to the later onset of first intercourse in Whites. Later menarche in Whites was negatively related to contraceptive use at first intercourse. Those Whites living in the Northeast were more likely to postpone first intercourse and more likely to use condoms than Whites in other regions. The delay in intercourse was associated with the high percentage of Catholics in this region. Non-Whites and Hispanics showed a weak relationship with residence and age of first intercourse. Yet, a strong relationship was present in terms of contraceptive choice: non-Whites in the Northeast were more likely to use methods other than the condom or pill. For Whites, non-Whites, and Hispanics, young people living with two parents (either biological or adopted) were more likely to postpone first intercourse. The effect of family status and contraceptive choice differed by race. Cooksey, Rindfuss, and Guilkey (1996) found that "Black females living with two parents were more likely to use a condom, while their White counterparts were less likely to report using other methods" (p. 66). Again, the use of broad racial categories, in this case Whites, non-Whites, and Hispanics, overlooks the possible salience of ethnic and cultural variables.

## Attitudes: Liberal vs. Conservative

The importance of attitudes as part of human behavior has been widely recognized. Experts have claimed that individual behavior is shaped by one's attitude toward that behavior (Green, Kreuter, Deeds, & Partridge, 1980; Marlatt & Gordon, 1985; Miller & Rollnick, 1991; Wilson, 1992). Despite the importance of attitudes, little research has been conducted within this domain. One reason for this scarcity is that it is difficult to assess attitudes, particularly those associated with sexuality issues (Cambell, Peplau, & DeBro, 1992). Lack of suitable instrumentation is a major part of the problem

(Yarber, Torabi, & Veenker, 1989). Recent attitude research indicates that attitudes are best measured in terms of multi-components, such as beliefs, feelings, and the intention to act (Yarber, Torabi, & Veenker, 1989). The ability to measure attitudinal components connected to sexuality-related choices would be most suitable for evaluating and creating educational programs. For example, understanding the impetus for first coitus, assessing how young people feel about pre-marital sexual behavior, knowing what they believe about that behavior, and identifying their intention to act upon this behavior would enable educators to develop more sensitive approaches to this problem behavior.

Existing research tends to narrowly focus on few areas. These include the following: sexual promiscuity (pre-marital sex), STD's, AIDS, and condom use.

One of the major factors associated with attitudes and sexuality is gender. Traditionally, sexual activity has been documented to be more widespread among males than females. Yet there is considerable evidence that these gender differences are diminishing (Coales & Stokes, 1986; Jessor & Jessor, 1975; Miller & Olson, 1988). Miller and Olson (1988) report that there is a strong relationship (across the genders) between liberal attitudes towards pre-marital sexual experiences and actual sexual experience. In their study of 15-17 year olds, more than half of those self-reported virginal teens indicated that sex before marriage is morally wrong, whereas less than 20% of non-virgins in the sample gave the same response. The differences between the genders was negligible. In a more recent study, Roche and Rambsey (1993) found that 14% of female and 10% of male college undergraduates conservatively stated that pre-marital intercourse was immoral and wrong.

Brown, Nassau, and Barone (1990) looked at grade-related differences in attitude towards AIDS. They also found that gender was not a significant predictor of attitude towards various sexuality issues. They found that age and grade level was a more

weighty predictor of attitude towards AIDS. Students at the elementary level were by far more conservative than those students at the junior high level.

In addition to age and gender, the influence of other contextual factors such as religion, religiosity, individual and parental educational attainment, and socio-economic status has been proven to be a significant predictor of sexual attitudes in adolescents and young adults (Brewster, 1994; Cambell, Peplau, & DeBro, 1992; Goodman & Cohall, 1989; Krull, 1994; Miller & Olson, 1988; Moran & Corley, 1991; Roche & Rambsey, 1993).

Attendance at religious services consistently explained significant variation in attitude (Coker et al., 1994). Those who attended services regularly were more conservative in their pre-marital sexual attitudes, as were those who stated that they were very religious. This has been supported in numerous research initiatives (Brewster, 1994; Miller & Olson, 1988; Roche & Rambsey, 1993).

The educational attainment of adolescents and young adults and the educational level of their parents have also been found to be highly predictive of liberal and conservative attitudes towards sexuality issues. Krull (1994) cites in her research that, contrary to popular view, the more education one has, the greater the impact on liberal sexual attitudes. Essentially, Krull states that more highly educated individuals have more liberal dispositions toward pre-marital sex, which actually increases promiscuous sexual behavior. Others in the field agree that increased educational attainment prompts more liberal attitudes, but not necessarily liberal behavior (Brewster, 1994; Cambell, Peplau, & DeBro, 1992; Feignbaum, Weinstein, & Rosen, 1995; Miller & Olson, 1988). These researchers also support the notion that parents' educational level is greatly influential upon his/her child's sexual attitude.

Krull (1994) asserts that higher educational attainments promote the very behavior that society seeks to prevent. He found that "level of education, however, had a significant indirect effect on sexual promiscuity through liberal sexual attitudes (Beta=.11)" (p. 11). This has been linked to the belief that those with more education are less constrained by traditional norms, in this case liberalism towards sexuality issues. Conversely, those who are less educated are likely to engage in conformist (conservative) attitudes and behaviors (Krull, 1994).

Educational attainment and socio-economic status are closely linked; like elevated educational attainment, increased economic standing does influence liberal sexual attitudes (AGI, 1994; Brewster, 1994). Research indicates that those young people coming from families with high-income status are more likely to have liberal sexual attitudes, yet are less likely to engage in early pre-marital sexual intercourse (Brewster, 1994; Luster & Small, 1997). Brewster found that "Median family income...has a negative impact on coital risk. Each $1,000 increase in median family income reduces the risk of experiencing first intercourse during adolescence by 1.2%" (p. 416).

This is likely to be the result of a multitude of factors, for example: the positive effects of an intact family, reduced likelihood of both parents working full-time outside the home, and increased parental (maternal) involvement and daily supervision (Luster & Small, 1997). The reason for this is not entirely clear and has not been documented exclusively (Brewster, 1994).

## Social Constructionist Theory

Social Constructionist Theory challenges dominant and conventional thinking by destabilizing existing explanations for sexual knowledge, attitudes, and behaviors (Tiefer, 1995). Constructionism has its roots in earlier eras and is no way an intellectual trend.

Its current metamorphosis brings together several disciplines that have one emphasis in common: that individuals play an active role, guided by their culture, in structuring the reality that affects their values and behavior (Gergen, 1985). This perspective is in contrast with popular thinking, empiricism and positivism, which ignore the active role of the individual in shaping their lives in favor of uncontrollable external forces that manipulate their existence (Focault. 1990; Gergen, 1985; Tiefer, 1995).

Many scholars credit Michel Focault's widely read 1976 essay with popularizing the concept that ideas, attitudes, and behaviors concerning sexuality are prejudiced by socio-historical and socio-cultural conditions (Tiefer, 1995). Thus, differences in sexual knowledge, attitudes, and behaviors between differing ethnic/cultural groups are to be expected.

Focault's main argument is that sexuality in America was not repressed during the Victorian era, as so many historians believe. Focault argued that this notion of repression was devised or constructed for reasons that better suit the socio-political historians of that era (Focault, 1990; Gergen, 1985; Tiefer, 1995).

Focault believed that sexuality and sexual experiences are produced, changed, and modified over the life span. He likens human sexuality to a dynamic journey that begins at conception and ends with death. This post-modern view of sexuality imposes that sexuality is highly individualized, molded by socio-cultural forces, is central to personality and relationships, and is lifelong (Tiefer, 1995). Tiefer (1995) states "Sexualities and sexual experiences are produced, changed and modified within an ever changing sexual discourse" (p. 19).

For this reason, historical studies are so essential to social constructionist research because they provide a way to analyze the changing shifts in cultural meanings that are attached to sexuality. Caplan (in Bretell & Sargent, 1993) warns that "While western

culture may have a concept of sexuality divorced from reproduction, marriage, or other social domains, it is not possible to analyze sexuality without reference to the economic, political and cultural matrix in which it is embedded" (p. 149). It is implausible not to expect differences between ethnically and culturally different groups of individuals. For example, in Vance's (1980) study of gender systems, the attempt is made to breakdown the long-standing arrangement that the gender systems, as recognized by the western world, is made up of just two genders: male and female. Therefore, individuals are identified as either masculine or feminine. This dichotomy leaves little room for variance within our culture (Vance, 1980), thus limiting our ability to understand the differing perspectives of individuals and groups of individuals found within the population.

By investigating differing cultures and the way they understand gender, strict referents to male and female become more obscured. Some research suggests that other cultures consider at least three phenotypic sexes in human culture (Brettell & Sargent, 1993). For example, the androgenous hijras of Indian society reflect a third gender role. The role of the hijra is deeply rooted in Indian culture and accommodates various needs, behaviors, identities, and personalities. Hindu culture encompasses ambiguities and contradictions in gender without trying to resolve them. The hijra role is a powerful figure that is entrenched in Indian myth, lore, art, and, ritual. Hijras see themselves as neither man or woman, thus reflecting a third gender category. The accommodation of the hijra role reflects the extent to which contradictions are embraced and tolerated by this culture (Brettel & Sargent, 1993; Nanda, 1990). These examples illustrate that the criteria for describing a particular event is highly circumscribed by culture, history and/or social context (Miller & Fowlkes, 1980; Vance, 1980).

Gergen (1985) asserts that in order to study sexuality in a way that best represents truth, empiricists accounts of scientific knowledge must be eschewed in favor of

constructionist inquiry techniques. These techniques entail a thorough investigation of several domains: philosophy, sociology and, biology to name a few. Essentially, a biopsychosocial approach and understanding, that welcome the multi-factorial paradigm that defines the phenomenon of sexuality, must be employed.

The major obstacle to the social constructionist approach is the domination of theory and research guided by the biomedical model. The privileged position of biology in sexuality is based on the notion that the body dictates action, experience, and meaning (Tiefer, 1995). This essentially reduces sexuality to physical sex. Traditionally, sexuality is seen as an act of nature, composed of actors and a script that is inherent to the body and concentrated in the genitals, and basically the same for all actors everywhere (De Cecco & Elia, 1993). De Cecco and Elia (1993) refer to this as biological essentialism, which has its origins in the eighteenth and nineteenth centuries. Essentialists believe the motive for sex lies within the recesses of the body. The instinct, drive, tendency, impulse or chemistry are responsible for driving two individuals of the opposite sex towards one another to ensure successful completion of the great primal act. This pre-determined biological norm propels individuals toward their biological destiny.

Why has the biomedical model retained such a tight grasp on sexuality? Tiefer (1995) states, "The privileged position of biology in sexual discourse is based on the assumption that the body dictates action, experience, and meaning" (p. 24). She also feels that in contemporary society, the reason is a political one. Emphasis on the biology of sexuality has legitimized it for centuries, and continues to do so today.

Focault believed that copious attention to sexuality was and continues to be motivated by basic concerns: to ensure the perpetuation of the species, to maintain the labor force, and to normalize social relationships. This may be reduced to ensuring a politically correct and economically useful sexual society (Focault, 1990). Thus, the

biomedical model and biological essentialist theory has served to limit and confine our knowledge and understanding of human sexuality (De Cecco & Elia, 1993).

Social constructionist approaches can delimit and unlock many fundamental (pre)conceptions held by society over the centuries. This enhanced ability to describe and understand sexual actions, attitudes, and behaviors can serve to pro-actively create much needed change. Creating change is the ultimate task for sexuality educators today.

## Models of Behavior Change

Motivating people to change is never an easy task. Convincing adolescents and young adults, who perceive themselves as invincible, to alter sexual behaviors that may be harmful is increasingly daunting. Currently, the educational system in general utilizes the least effective behavior change method in hopes of deterring individuals from negative sexual behaviors and attitudes. Traditional lecture type experiences are widely used at every level of education today (Hester & Miller, 1995). This approach often fails because it does not facilitate individual involvement in the learning process. The teacher is seen as an informational icon, spouting facts and notions that are to be ingested unquestionably by the masses.

Differences in sexual behavior across demographic groups have been discussed. From an educational standpoint, these differences cause a quandary in terms of planning curriculum for the school-aged population (Hoffreth & Hayes, 1987). There is, however, an emerging school of thought concerning education, one that acknowledges the differences, yet seeks to encompass the commonalities across the sub-populations. For example, negative emotional states, intrapersonal and interpersonal conflicts, social pressures, self-efficacy and coping response are all elements shared across these sub-populations (Marlatt, 1985a; Miller & Rollnick, 1991). Addressing these commonalities

can help educators do their job more proficiently. By utilizing a holistic approach, young people may be better able to understand the reasons and motives behind their behavior and attitudes. Providing adolescents and young adults with the appropriate tools may empower them to change behavior on their own terms (White & DeBlassie, 1992). This changing paradigm is reflected in an approach that is holistic in theory. Wallace (1990, 1992) refers to this as a biopsychosocial approach to understanding problem behavior.

Biopsychosocial Understanding of Problem Behavior

Traditional models that have been used to understand problem behaviors purveyed the notion that each behavior be treated as a separate entity (Marlatt, 1985a). However, contemporary approaches point out that problem behaviors tend to result from a multitude of determinants. Wallace (1990) states, "A biopsychosocial approach focuses attention on biological, psychological, and social factors" (p. 150). These factors often act in concert when experienced as a problem behavior. Marlatt (1985a) also supports this approach and breaks down these components into three similar categories: biological, psychological, and socio-cultural. Both researchers maintain that problem behaviors are not the result of any one particular etiological agent, yet may be the result of a synthesis of several factors (Marlatt, 1985a; Wallace, 1990, 1992).

Traditionally, models of behavior change have focused their efforts on behavioral maintenance programs geared toward treatment of addiction problems (Marlatt, 1985a). Most of the literature looks at problem behaviors that involve drug and alcohol dependencies. However, the biopsychosocial approach can have applications that extend beyond the originally intended area of substance abuse (Marlatt, 1985a).

The biological domain principally focuses on the physiological addictions, the biological reactions to pharmacologic substances such as cocaine (Wallace, 1992).

However, genetic predispositions to and family history of problem behaviors may also be within this realm. Marshall, Hudson, and Ward (1992) implicate that some sexually deviant behaviors may be hormonally influenced.

The psychological domain focuses on several areas. Wallace (1992) states that "Attention to the psychological domain permits our assessment to focus on childhood developmental history, family history, psychiatric history, and observation of defensive and psychological functioning" (p. 181). The propensity and motives for engaging in unsafe sexual practices may be included within this domain.

Socio-environmental factors generally focus on external stimuli that trigger problem behavior. Wallace (1992) found that "idiosyncratic conditioned stimuli" (p. 183) may cause a conditioned response that results in the problem behavior. The quality and (non)existence of social support (parents) and the impact of life events (sexually abusive relationships) can be included in this category (Wilson, 1992).

The biopsychosocial model relies on a broad consideration of all three domains. Its strength is found in this multi-determined approach to understanding problem behaviors.

Relapse Prevention and Motivational Interviewing

There are two strategies that can be utilized to foster behavior change. Marlatt (1985a) describes a Relapse Prevention (RP) behavior change model, and Miller and Rollnick (1991) present Motivational Interviewing (MI) techniques.

RP deals with procedures that attempt to prevent relapse or slip situations. RP procedures can be applied to various sexual risk-taking behaviors and can help young people anticipate and prevent these situations; for example, ensuring that an adolescent consistently uses a condom during intercourse. RP methods can be employed to maintain

this commitment to safer sex practices. MI methods can be employed to reduce cognitive dissonance and thus increase cognitive awareness of the salience of unhealthy behaviors.

Bandura (1977) identifies the concept of self-efficacy, which is an individual's ability to demonstrate a particular task or skill. Self-efficacy is important within this framework in that it demonstrates that behavior is determined by expectancies and incentives (Bandura, 1977).

Expectancies are comprised of three components. The first includes beliefs about the connectedness of environmental cues. The second includes expectancies about consequences of personal actions and how they influence certain outcomes. The third includes expectancies about one's competence to perform necessary behaviors in order to influence certain outcomes. Collectively, they make up the concept of self-efficacy (Bandura, 1977).

Incentives or reinforcements are the value of a particular outcome. The outcome may be peer acceptance, popularity, physical appearance, or others. Behavior is regulated by the incentives/reinforcements as understood by the individual (Rosenstock, Strecker, & Becker, 1988). Rosenstock et al. (1988) indicate that personal performance accomplishments are the most influential in terms of building self-efficacy, whereas vicarious experience obtained through watching others is a close second. Verbal persuasion, which is most widely utilized in education, is considerably less powerful than the others. However, a synthesis of the three can be successful in helping individuals change behavior (Rosenstock, Strecker, & Becker, 1988).

In sum, these methods can be utilized to guide young people to make broad behavior and lifestyle changes that can reduce risk (Marlatt, 1985a; Miller & Rollnick, 1991; Rosenstock, Strecker, & Becker, 1988).

Relapse Prevention. Relapse is an ever-present challenge for every professional in the health-related field. Marlatt (1985a) describes relapse as a return to a problem behavior that involves many factors and occurs over time. The problem of relapse has generally been discussed in terms of addictive disorders; however, this theory can and has been applied to other areas of the health field. RP is a self-control model that involves behavioral skill training, cognitive interventions, and lifestyle change procedures that aid individuals in avoiding relapse (Marlatt, 1985a).

An effective RP program is described as one that teaches individuals to become their own "maintenance man" (Marlatt, 1985a). This is the goal of the RP behavior change model. Contrary to traditional models of addiction, such as the disease model in which addictive behavior is seen as an uncontrollable symptom of underlying disease, RP posits that addictive or negative behaviors are indeed under the control of the individual (Marlatt & Gordon, 1985). The RP model does not place blame on the individual for the negative behavior, as do proponents of the moral model. Yet RP does place full responsibility for creating change on the individual (Marlatt, 1985a).

This model allows individuals to emerge from past addictive and negative patterns of behavior with respect, dignity, and a positive self-image. The RP model also supports the objectives as proposed by the U.S. Public Health Service--Disease Prevention Objectives for the Nation as outlined by The Healthy People 2000 document. These objectives urge people to take responsibility for their health and discourage the passive recipient role (USDHHS, 1989).

Relapse Prevention Components. By investigating the cognitive antecedents of a relapse or slip episode, Marlatt and Gordon (1985a) have identified that rationalization, denial, and decision-making processes precede the relapse or slip. For instance, an adolescent who wishes to remain abstinent may perceive a sense of self-control until

he/she encounters a high-risk situation (Marlatt & Gordon, 1985a). A high-risk situation is one that poses a threat to the individual's sense of control and increases the risk of a relapse or slip (Marlatt, 1985b), perhaps experiencing direct social pressure (interpersonal conflict) to engage in a sexual behavior. If the individual can cope with this situation, he/she will experience increased self-efficacy and reduce the risk of relapse/slip. According to Marlatt (1985c), the presence of other adolescents engaging in a (sexual) behavior creates indirect social pressure and enhances risk. Marlatt (1985b) indicates that intra-personal-environmental determinants "include all determinants that are primarily associated with intra-personal factors (within the individual), and/or reactions to non-personal environmental events" (p. 80). These determinants involve negative emotional states, moods or feelings (Marlatt, 1985b).

If the adolescent who has decided to avoid unsafe sex or be abstinent does not cope well and engages in the sexual behavior (relapse/slip), he/she may experience a cognitive-affective reaction called an "abstinence violation effect" (AVE) (Marlatt, 1985c). The AVE is intensified if the relapse/slip is attributed to internal factors such as will power or (sexual) urges (Marlatt, 1985c). This will be accompanied by a sense of loss of control and decreased self-efficacy. Conversely, the AVE will be reduced if the relapse/slip is attributed to external, changeable and controllable factors (Marlatt, 1985c p. 179).

Another possible cognitive precursor to a relapse/slip situation is the "apparently irrelevant decision" (AID) (Marlatt, 1985c). AID is essentially a decision-making process that places the individual in high-risk situations. For example, an adolescent may go on a date with an individual he or she is physically attracted to and decide to spend time "making out" in an isolated setting. One decision may lead to another and a series of AID's may jeopardize the individual's ability to remain abstinent.

According to Wilson (1992b), "A major reason for studying relapse is the need to improve the efficacy of treatments" (p. 4) as well as health education interventions. In terms of this project, increased sexual self-efficacy may provide positive long-term benefits if health education efforts are improved. Effectively preventing adolescents and young adults from engaging in unsafe sexual practices has powerful implications for their future welfare and for society at large.

Stages of Change Theory. Problem behaviors may be viewed as acquired habits or over-learned behaviors that can be modified by new learning procedures (Marlatt, 1985b). Adolescents and young adults can learn how to change negative behaviors, and knowing professionals and health educators can help them to do so. Behavior change is governed by several different factors of learning which can be influenced (DiClemente, 1991). DiClemente (1991) illustrates that the behavior change process can be broken down into five separate stages. These stages represent the sequence that an individual passes through during the change process, as follows:

1. Precontemplation, the stage in which the individual is not considering making any changes at all.
2. Contemplation, the stage in which the individual has considered a possible change in behavior (generally within the next six months).
3. Action occurs when behavior change is underway.
4. Maintenance occurs when the individual has maintained behavior change (for at least six months).
5. Relapse occurs when the individual returns to a problem behavior.

DiClemente (1991) asserts that individuals are likely to cycle through these stages several times before successfully making any long term-behavior changes. DiClemente (1991) states that "clients can come in at any point in this cycle so the challenge to the

therapist is to first understand where they are in the cycle and to assist them " (p. 191).

Many health behavior change programs have had limited effectiveness because the interventions have been developed for individuals whoare ready to take action, when, in fact, most people are in the precontemplation and/or contemplation stages. This model asserts that programs would be more effective if they were aimed at these stages (Grimely, Riley, Bellis, & Prochaska, 1993).

This model can be applied in a preventive fashion to students of all ages and all stages of change. By reaching precontemplators (for example, sexually inactive adolescents), interventions can be employed that may reduce high-risk situations and their consequences (Prochaska, DiClemente, & Norcross, 1992). The model, as developed by Prochaska and DiClemente (1992), analyzes and encourages behavior change by motivating individuals to change on their own. These concepts are relevant to the study of sexual behavior among adolescents and young adults. This model is centered on the individual who ultimately controls the outcome of success or failure in terms of behavior change. The helping professional can only facilitate and encourage the process. DiClemente (1991) states, "This approach treats the client as a fully functioning managing partner in the process of change" (p. 201). When individuals perceive that they are in control during the behavior change process, they are more likely to succeed and experience an enhanced sense of efficacy (Miller & Rollnick, 1991c).

Motivational Interviewing. Motivational Interviewing (MI) focuses on factors that motivate people to change problem behaviors (Miller & Rollnick, 1991). It is common to see people persist in patterns of behavior that are potentially harmful to them, just as it is common to see people break free of these patterns only to relapse or slip back into old behaviors (Marlatt, 1985a; Wilson, 1992a).

MI is an approach designed to help individuals build commitment to achieve behavior change. It relates well to the previously discussed strategies, relapse prevention (Marlatt & Gordon, 1985; Wilson, 1992) and stages of change theory (Di Clemente, 1991). The theoretical basis for MI is centered on two areas, ambivalence and the conflict between immediate gratification and temperance.

Ambivalence is said to be the heart of the problem (Miller & Rollnick, 1991). Ambivalence is characterized by the individual's desire to change at one moment and the desire to continue with problem behaviors at another. Understanding that this is a natural part of the change process can help individuals move toward permanent behavior change (Miller & Rollnick, 1991d).

The ever-present conflict between immediate gratification and temperance is the major obstacle which must be surpassed in order to attain behavior change (Miller & Rollnick, 1991b). By implementing the eight building blocks or strategies that facilitate MI, helping professionals can promote readiness and increase the probability of stable behavior change. These building blocks are stated below:

The Eight Building Blocks of MI

1. ADVICE must be clear, concise information is presented in a non-hierarchal way that provides the individual with alternatives and options to the existing problem behavior (Miller & Rollnick, 1991b). For example, providing adolescents and young people with the knowledge they need to choose more appropriate and healthy sexual behaviors.
2. BARRIERS must be removed, and issues of access must be addressed (Miller & Rollnick, 1991b). For example, availability of clinics and the transportation to and from, socio-culturally appropriate programming, and the provision of condoms to this young population.

3. CHOICES must be provided so that the individual feels that he/she has freely chosen a particular course of action.
4. DESIRABILITY of the problem behavior must be reduced. This can be accomplished by increasing awareness and salience of the consequences (Tober, 1991). Suggesting alternative activities or behaviors (i.e., school work or extracurricular activities) to young people may also diminish desirability of negative sexual behaviors.
5. EMPATHY must be employed by the professional so that the student feels that he/she is truly understood. This aspect is essentially a skill learned by the practitioner or educator in this scenario (Miller & Rollnick, 1991e).
6. FEEDBACK comes in many forms and must be consistent in order to keep the individual on track and moving forward (Miller & Rollnick, 1991b; Tober, 1991). This can be achieved by familial and peer support as well as from educators and the community at large.
7. CLEAR IDENTIFICATION OF GOALS will help the individual realize progress in tangible ways. These goals are established by the individual with guidance from the educator (Miller & Rollnick, 1991b).
8. ACTIVE HELPING should be occurring continuously throughout the change process. Active helping is merely a way to facilitate and guide the progression towards stable behavior change (Miller & Rollnick, 1991b).

These building blocks can be used by educators as guidelines to promote readiness to change. Since most educators work with a large number of students at one time, great care must be taken with mixing the appropriate combinations of interventions. Although this is not an easy task, the results of utilizing this method are by far more likely to produce positive behavior change within this population (Baker & Dixon, 1991;

Tober, 1991).

The strength of this approach rests on the belief that direct confrontation is not useful and rarely successful in the change process (Miller & Rollnick, 1991a). This belief resounds Healthy People 2000, National Health Promotion and Disease Prevention Objectives (USDHHS, 1989). The shared premise for this document and MI is that the traditional passive individual can no longer be tolerated; individuals must take responsibility and an active role in their personal health.

## Conclusion

This chapter has provided a literature review in four areas: identification of adolescent and young adult non-marital sexual behaviors; attitudes concerning various sexuality issues; Social Constructionist Theory as it relates to adolescent and young adult sexual issues; and models of behavior change and how they can be used to promote safer and appropriate sexual behaviors and attitudes for the population under study.

Next, Chapter III presents the methods of the study.

# Chapter III

# METHODS AND PROCEDURES

This chapter will present the methods and procedures of the study. For the purpose of presentation, the chapter has been divided into four sections: description of the subjects, description of the research instrumentation, description of the procedures, and treatment of the data.

## Description of the Subjects

A sample (N=338) of adolescents and young adults between the ages of 17 and 26 attending a metropolitan community college in New York was included in this study. Total enrollment during the sampling period was 14,537; 6,656 were full-time students and 7,881 were part-time students. Approximately 70% are enrolled in degree programs. Socio-economic status of the student body is quite diverse. Where 25% of the students come from families whose total annual income is below $14,000, another 25% come from families whose total annual income lies between $14,000 and $20,000. Another 11% come from families with total earnings between $21,000 and $27,000 annually. Some 18% of students come from families with total annual incomes between $28,000 and $41,000, and the remaining 22% of students come from families with total annual incomes that exceed $42,000. Family educational background was equally diverse among the sample population. Some 25% of parents completed the eighth grade or less, 21% some high school, 29% graduated high school; 13% have some college, 8% are college

graduates, and 5% have postgraduate experience. This student population represents varying regional ancestry as follows: Asia, 6.2%; Western Europe, 27.3%; Eastern Europe, 17.0%; Middle Eastern, 3.7%; South and Central America, 4.5%; Caribbean, 32.5%; U.S.A., 6.7%; Africa, 1.8%; and Other, 0.2%. Some 60% speak English as their primary language, while 12% speak Russian, 8.9% are Spanish-speaking, 3% Creole, 3% French, 2.9% Italian, 1.2% Hebrew, and the remaining students are classified as Other. Approximately two-thirds of the student population is female. All student information was obtained from the Office of Student Affairs of this metropolitan community college.

## Sampling Technique

The sampling technique that was utilized was convenience sampling. All participants were enrolled in Health or Physical education classes. Data were collected at the end of the 1997 Spring semester.

## Description of the Research Instrument

The Sexual Knowledge and Attitude Test for Adolescents (SKAT-A) was developed to assess knowledge and attitudes about sexuality. The relationship between these and various demographic characteristics and sexual behaviors in adolescent and young adults can be examined with this questionnaire (Fullard, Johnston, & Lief, 1997).

The SKAT-A was based on the Lief and Reeds (1972) Sex Knowledge and Attitude Test (SKAT). The original SKAT was primarily developed to assess sexual information in health professionals and was initially administered to medical students. Thus, the current SKAT-A provides an appropriate means for assessing the knowledge, attitudes, and behaviors of an adolescent and young adult population.

The original version of the SKAT-A (1990) provided information about demographics, attitudes, knowledge, and behavior relating to sexuality. This version varies little from the current version which is similar in its intent (Fullard, Johnston, & Lief, 1997).

The current version of the demographics section requests basic information on age, school experience, and determinants of socio-economic status. This section can be and was modified to meet the needs of this investigator. This study called for the expansion of several demographic factors. Ethnic background (question #3) includes 11 choices and language spoken at home (question #4) includes 9 choices. Religious identification (Question #14) includes 17 choices (Fullard, Johnston, & Lief, 1997).

The Attitude section contains 40 items designed to assess four specific content sub-scales: masturbation, pornography, pre-marital sex, and abortion. This section utilizes a Likert-type response format. Some 11 items are reverse-scored. High scores on the Attitude scale indicate a more liberal, sexual attitude (Fullard, Johnston, & Lief, 1997).

The Knowledge section consists of 40 items and employs a true/false/not sure format. A total of 24 items are reverse-scored. The content ranges from pregnancy, contraception, rape, and masturbation to sex education.

The Behavior Inventory serves a variety of investigative purposes. Questions include age of initiation of sexual activity, number of partners, dating practices, contraceptive use, sexual practices, coercive sex, perceived knowledge, and sexual communication. Individual items can be added or changed to meet the needs of particular investigators (Fullard, Johnston, & Lief, 1997).

Reliability and Validity

The following psychometric properties of the SKAT-A are based on a field test conducted by the originators of the scale, Fullard, Johnston, and Lief (1997). Three hundred eighty-five undergraduate students from two universities in the Northeast were sampled. The mean age was 19.6 years, and the range was 17-22 years of age. Socio-economic status (SES) was identified according to representative social class distinctions; 73% was Caucasian, 18% was Black, and the remaining 9% was made up of Asian and Hispanic students (Fullard, Johnston, & Lief, 1997).

Internal consistency estimates were computed for the full Attitude scale. The alpha coefficients were .89. Temporal stability was calculated over a two-week period on 50 subjects. A test-retest coefficient of .89 was obtained for the full-scale attitude scores (Fullard, Johnston, & Lief, 1997). Internal consistency for the Knowledge scale was .74. While this is acceptable, this score may be depressed as a result of the heterogeneity within the scale. Support for construct validity of the Attitude and Knowledge scales was obtained by correlational analysis from these two scales and selected items from the Behavior scale. Each of the five sub-scales in the Attitude section was shown to be correlated with other SKAT-A responses. This substantiates the meaning and interpretation of the scales. All correlations were significant at the $p < .01$ level (Fullard, Johnston, & Lief, 1997).

Validity of the Knowledge scale was demonstrated through correlation of Knowledge scale scores and related items from the Attitude scale and Behavior inventory. Sexual knowledge and attitude were related (r=.44). Sexual behaviors were found to be related to sexual knowledge, and those with more liberal attitudes were more knowledgeable. More knowledgeable individuals were more likely to have had sexual intercourse (r=.28) and more likely to use contraceptives more frequently (r=.19). All

correlations are significant at the $p < .05$ level (Fullard, Johnston, & Lief, 1977).

## Procedures

Students were informed of the intent and purpose of the research project. Subjects were told that participation was voluntary and confidential, and that no attempt would be made to identify participants in any way. All participants were asked to sign a consent form and remit it before completing the survey. The SKAT-A was self-administered. Students were briefed with regard to the procedures concerning the questionnaire.

Following instructions, both the researcher and classroom instructor left the classroom. All students were given a survey. All surveys, whether completed or not, were returned and placed to a receptacle at the end of the class period.

Permission to administer the SKAT-A was sought by contacting the Chairperson of the Health and Physical Education Department of the host institution. A formal application for permission was completed, reviewed, and granted by the institution's Committee on Human Subjects.

Cooperative instructors were solicited via the inter-office mail system. All willing instructors filed a letter of commitment and mailed them directly to the researcher. Prior to the survey administration, the researcher and instructor discussed the survey procedures.

### Data Analysis Plan by Research Question

Data obtained were analyzed using the SPSS (6.1) software package.

Data analysis began with an overall summary of selected demographic variables. This was followed by descriptive statistics that related to each of the six research questions. Levels of sexual knowledge, including HIV, STD, and contraception

knowledge, were analyzed by comparing mean score differences among the seven ethnic groups.

Analysis of variance procedures were then utilized to determine if differences in each domain were significant. If differences were significant, a Neuman-Keuls post-hoc procedure was utilized to test for significant differences between individual groups. The level of confidence was established at $p < .05$.

Differences in endorsement of sources of sexual information were analyzed utilizing the Chi-square statistic. The level of confidence was set at $p < .05$. A one-way analysis of variance was utilized to test whether ethnicity had any relationship to differences in attitude toward pre-marital sex. Again, the Neuman-Keuls procedure was utilized to assess differences among the seven groupings. Mean scores were also compared when ascertaining differences in conservative or liberal sexual attitudes across the groupings. These same procedures were used to identify whether students were sexually active, the age at which they had first pre-marital sex, the number of sexual partners students had in the past year, and whether religiosity had any effect on number of sexual partners.

Chi-square analysis was utilized to assess differences between groups in terms of impetus for first coitus and history of pregnancy. All confidence levels were set at $p < .05$.

In order to identify stage of change regarding condom and contraception use, frequency in usage was established using percentages. The chi-square statistic was also utilized to identify group differences in condom use. In addition, cell means were compared to identify differences in stage between groups.

Analysis of variance was used to test for differences between virginal and non-virginal students and their attitudes towards pre-marital sex. Mean score differences were

also used to compare the groups on this issue. The same procedures were used to test if level of maternal education and overall sexual attitude and number of sexual partners were different among groups. The Neuman-Keuls procedure was also utilized to test for significant differences between groups. Analysis of variance was used to test if religiosity and number of partners in the past year were significantly different among groups. Mean scores were also used to elucidate any striking differences among groups. Lastly, an analysis of variance was used to test for differences among groups with regard to number of sexual partners and history of coercive sex.

# Chapter IV

# RESULTS

This chapter will address the analysis of the data. An overall summary of the various demographic variables will be presented first. Descriptive statistics related to each of the six research questions will then be presented.

## Data Preparation

Prior to assessment of the specific research questions, descriptive statistics were computed on each item in the scale. This was done to help identify any data entry problems and identify any atypical response patterns that might result in misinterpretation of the data.

### Demographic Variables

A total of 338 community college students participated in this research study. A 70% criterion was set to identify valid cases so that no protocols missing more than 30% of scale responses were used in the final data analysis. Regarding gender, 61.3% (n=206) of the sample was female and 38.7% (n=130) was male. The class breakdown was represented by 38.3% freshmen, 43.2% sophomores, 9.7% juniors, 4.9% seniors, and the remaining were reported as Other or missing data. More detailed information concerning demography can be seen in Table 1.

Table 1

Detailed Demography of the Sample Population (N=338)

| ETHNIC BREAKDOWN | % | | % |
|---|---|---|---|
| African-American | 9.4 | Hispanic/Latino | 6.9 |
| Caribbean | 8.5 | White-American | 47.1 |
| Asian | 3.3 | Other | 12.4 |
| Haitian | 8.5 | | |

| | |
|---|---|
| Students born in the United States | 75.7% |
| Students born outside of the United States | 24.3% |
| English as a primary language | 84.8% |

| LIVING ARRANGEMENTS | % | | % |
|---|---|---|---|
| Live with mother | 75.9 | Live with uncle | 2.4 |
| Live with father | 57.1 | Live with other | 15.8 |
| Live with grandparent | 7.7 | Live with both biological | 52.6 |
| Live with aunt | 3.6 | parents | |

| PARENTAL INFLUENCE | Father % | Mother % |
|---|---|---|
| Father employed | 86.6 | 75.8 |
| Receiving public assistance | 9.5 | 16.7 |
| No H.S. diploma | 7.6 | 38.6 |
| Some college | 17.7 | 10.8 |
| Four-year degree | 9.8 | 10.5 |
| Graduate degree | 22.5 | 10.2 |

| RELIGIOUS AFFILIATION | % | | % |
|---|---|---|---|
| Anglican | 1.8 | Mormon | .3 |
| Baptist | 1.5 | Muslim | 1.5 |
| Catholic | 54.3 | Pentecostal | 2.7 |
| Episcopalian | 2.1 | Protestant | 2.4 |
| Jehovah's Witness | 1.5 | Presbyterian | .3 |
| Jewish | 14.0 | Seventh Day Adventist | 2.4 |
| Lutheran | 2.7 | Other | 4.8 |
| Methodist | 1.5 | No religious Affiliation | 5.1 |

| RELIGIOSITY | % |
|---|---|
| Very religious | 6.0 |
| Religious | 34.9 |
| Not very religious | 45.2 |
| Not religious at all | 13.9 |

Note: Students born outside of the United States reported a mean of 10.87 years living in this country.

## Statistical Analysis of the Research Questions

Prior to the assessment of the specific research questions and hypotheses, an item analysis and internal consistency analyses were conducted on the scales to ensure the integrity of the collected data. Results indicated no obvious biases attributed to response patterns or data entry errors.

Internal consistency coefficients (coefficient alpha) were acceptable for both the sexual attitude and sexual knowledge scales of the SKAT-A, at .87 and .68, respectively.

### Research Question 1

What is the level of knowledge about sexual practices and related issues (HIV, STDs, and contraception) among different ethnic groups within a sample of metropolitan community college students?

This question addresses four separate domains: (a) overall sexual knowledge, (b) HIV knowledge, (c) STD knowledge, and (d) contraception knowledge. Differences in knowledge between groups were addressed. Levels of knowledge were determined by correct number of responses to questions in each particular domain.

In terms of overall sexual knowledge, data indicate that the White-American students answered more questions correctly than any other group, with a mean of 26.12, displaying greater overall sexual knowledge. The Asian and Haitian students had the least number of correct responses, with means of 20.36 and 19.68, respectively (see Table 2).

An ANOVA revealed statistically significant differences across ethnic groups ($p < .0001$). A Neuman-Keuls procedure was then performed and identified significant differences between groups at the $p. < .05$ level. Data showed that White-American

Table 2

Mean Score Differences in Overall Sexual Knowledge

| Group | N | Mean | SD |
|---|---|---|---|
| African-American | 30 | 24.63 | 4.382 |
| African-Caribbean | 28 | 24.61 | 4.732 |
| Asian | 11 | 20.36 | 5.679 |
| Haitian | 25 | 19.68 | 5.588 |
| Hispanic/Latino | 23 | 22.78 | 5.222 |
| White-American | 154 | 26.12 | 4.044 |
| Other | 41 | 23.51 | 4.124 |

*$p < 0.05$

+F test used to determine statistical significance and p value

Note. Neuman-Keuls procedure determined statistical differences between groups. White-American students scored significantly higher than Haitian, Asian, Latino, and Other students, but not significantly higher than the African-American or African-Caribbean students.

students scored significantly higher than the Haitian, Asian, Latino, and Other student groups, but not significantly different than the African-American students. African-American students scored significantly higher than the Haitian and Asian students. African-Caribbean and Other students scored significantly higher than the Haitian and Asian students. Lastly, the Hispanic/Latino student group scored significantly higher than the Haitian group.

Analyses were also conducted on sexual knowledge scores between participants born in the United States and those born outside the United States. An Analysis of Variance was significant ($p < .001$) and consistent with the hypothesis that American-born participants presented a significantly higher ($M = 25.44$, $SD = 4.45$) sexual knowledge score than those born outside the United States ($M = 21.31$, $SD = 4.88$).

Subsequent analyses were then conducted to assess ethnic differences in levels of knowledge related to HIV, STDs and contraception. An Analysis of Variance procedure was used to address each of the three questions; results related to knowledge of HIV indicated significant ($p < .0001$) differences among ethnic groups. A Neuman-Keuls post-hoc procedure indicated that Haitian students presented significantly lower HIV knowledge scores than all other ethnic groups, with a mean of .62. In addition, the Other student category was also shown to score significantly lower ($M = .85$) than the White-American student group, which had a mean of .97.

An Analysis of Variance procedure showed that differences in STD knowledge between groups was not statistically significant.

However, an Analysis of Variance procedure illustrated that between-group differences in contraception knowledge was statistically significant ($p < .0001$). A Neuman-Keuls post-hoc procedure indicated that Haitians presented a significantly lower contraception knowledge ($M = 2.6$) score than all other ethnic groups. Also, the Other

category was shown to be significantly different (lower) from the White-American sample, with means of 2.9 and 3.4. No other significant group differences between ethnic groups were identified (see Table 3 for further information).

Further analysis was conducted to investigate whether gender differences were present in regard to the knowledge scales. Significant differences ($p < .001$) were present for contraceptive knowledge in the African-Caribbean group (females $M = 3.65$, $SD = .49$; males $M = 2.37$, $SD = 1.1$). Differences between gender in the White-American group were also significant ($p < .05$) for the overall sexual knowledge scale (females, $M = 26.72$, $SD = 3.5$; males, $M = 25.1$, $SD = 4.6$). Differences ($p < .05$) were also found within this group regarding contraceptive knowledge; females scored higher ($M = 3.51$, $SD = .72$) than males ($M = 3.21$, $SD = .82$). No other significant differences were found.

Research Question 2

From what sources of information do these students acquire their knowledge about sex? Is ethnicity related to differences in sources used to acquire information about sex?

The answer to these questions was derived in three ways. First, each possible source of information was analyzed in terms of overall frequency of endorsement across the entire sample. Second, comparisons were made between groups in terms of endorsement for specific resources. Third, cross-tabulations were performed across ethnic groups, and for each source, a chi-squared statistic was calculated to help identify significant differences in endorsement of individual sources.

Table 3

Mean Score Differences in HIV and Contraception Knowledge by Ethnic Group

| HIV KNOWLEDGE | | | | | | | |
|---|---|---|---|---|---|---|---|
| Group | (n) | M | SD | Group | (n) | M | SD |
| Haitian | (26) | .6154 | .4961 | Asian | (11) | .9091 | .3015 |
| Other | (41) | .8537 | .3578 | African-Caribbean | (28) | .9643 | .1890 |
| Hispanic | (23) | .8696 | .3444 | White-American | (155) | .9742 | .1591 |
| African-American | (31) | .8710 | .3408 | | | | |
| **CONTRACEPTION KNOWLEDGE** | | | | | | | |
| Haitian | (26) | 2.6000 | .8165 | African-American | (31) | 3.2333 | .8172 |
| Other | (41) | 2.8537 | .9370 | African-Caribbean | (28) | 3.2857 | .9370 |
| Asian | (11) | 3.0000 | .4472 | White-American | (155) | 3.3766 | .8171 |
| Hispanic | (23) | 3.1364 | .7102 | | | | |

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Results indicated that an overwhelming amount (84.6%) of respondents rely on their friends as sources of sexual information. The church was the least cited resource (4.5%) among this sample (see Table 4 for detailed information). However, it is important to note that any one source was not selected exclusively of the other sources. Participants were asked to check all sources that apply.

Across the groups (see Table 5), the source most frequently utilized to acquire sexual information was "friends" (84.6%). Results indicated significant differences between groups in the endorsement of friends as a source of sexual information ($p < .001$). This may indicate a significant probability that ethnicity is related to choosing friends as a source of sexual information. For example, White-American students were approximately twice (92.9%) as likely to choose this source than were the African-Caribbean students (57.1%).

In terms of parental sources, African-American students (48.4%), White-American students (49.4), and Other students (56.1%) cited parents approximately twice as much as their Haitian and Hispanic colleagues. The Chi-square analysis indicated a significant difference ($p < .0191$) across ethnicities in the choice of utilizing parents as a source of sexual information.

African-Caribbean (10.7%) and Hispanic (13.0%) students reported utilizing their siblings far less than the other groups. This trend was expressed across all groups, as the majority of individuals did not endorse this particular source (brother/sister) with much favor. Chi-squared results show no significant difference between groups and the endorsement of this source.

Similarly, Asian (0%) and White (9.7%) students cited "other relatives" with much less frequency than the other groups. Again, all of the groups were less likely to

Table 4

Percentages of Group Endorsement of Source Utilized to Acquire Sexual Knowledge

(N=332)

| Source | Valid Percent |
|---|---|
| Friends | 84.6 |
| Sex Education/Health Classes | 66.0 |
| Television | 59.9 |
| Movies | 55.7 |
| Books/Magazines | 50.9 |
| Parents | 44.3 |
| Brothers/Sisters | 24.4 |
| Other relative(s) | 15.1 |
| Church | 4.5 |
| Other sources | 6.9 |

Note: Percentages do not add up to 100% because students were encouraged to select more than one response.

Table 5

Percentage of Subjects Endorsing Sources of Information by Ethnic Group

| Ethnic Group | A | B | C | D | E | F | G | Total % |
|---|---|---|---|---|---|---|---|---|
| n | (31) | (28) | (11) | (23) | (23) | (155) | (41) | |
| Source | | | | | | | | |
| Friends | 80.6 | 57.1 | 81.8 | 73.9 | 82.6 | 92.9 | 85.4 | 84.6 |
| Parents | 48.4 | 32.1 | 27.3 | 21.7 | 26.1 | 49.7 | 56.1 | 66.0 |
| Siblings | 29.0 | 10.7 | 36.4 | 26.1 | 13.0 | 25.2 | 34.1 | 59.9 |
| Other relative | 25.8 | 21.4 | 0 | 26.1 | 26.1 | 9.7 | 19.5 | 55.7 |
| Books/ magazines | 58.1 | 46.4 | 72.7 | 47.8 | 34.8 | 52.3 | 41.5 | 50.9 |
| Movies | 51.6 | 39.3 | 63.6 | 65.2 | 52.2 | 63.9 | 39.0 | 44.3 |
| TV | 58.1 | 42.9 | 63.6 | 52.2 | 43.5 | 68.4 | 58.5 | 24.4 |
| Church | 0 | 3.6 | 9.1 | 8.7 | 8.7 | 4.5 | 4.9 | 15.1 |
| Sex | 71.0 | 53.6 | 72.7 | 52.2 | 60.9 | 74.2 | 61.0 | 4.5 |
| education | | | | | | | | |
| Other sources | 9.7 | 10.7 | 9.1 | 8.7 | 13.0 | 5.2 | 4.9 | 6.9 |

NOTE: A=African-American, B=African-Caribbean, C=Asian, D=Haitian, E=Hispanic/Latino, F=White-American, G=Other

endorse a familial source for sexual information. However, Chi-squared analysis shows that there was a significant difference ($p < .05$) between groups in the utilization of this source for ascertaining knowledge.

Books and magazines apparently were a much utilized resource for Asian students (72.7%). This group chose this source more often than did any other group. Yet analysis indicated no significant difference between the groups.

Movies seemed to have relatively equal significance across the groups, with the exception of African-Caribbean (39.3%) and Other students (39.0%) who chose this source significantly less frequently than the others ($p < .05$).

Whites (68.4%) and Asians (63.6%) endorsed television as an information source more frequently than any other group. However, no significant differences between groups were found.

Of all the sources, church was endorsed with the least enthusiasm across all groups. Not one of the African-American (0%) students cited church as a source of sexual information. However, Asian (9.1%) students cited this source with more frequency than any other group. No significant differences in utilization of this source between groups were found.

The frequency with which students cited Sex Education and Health Education classes as a sexual information resource was varied among the groups. White-American (74.2%) students chose this source more frequently than any other group. As a group, African-Caribbean (53.6%) students selected this source with the least frequency. Analysis revealed that group differences were not significant.

"Other" sources of information was cited with little frequency across all groups. The differences seen between groups were not statistically significant.

Research Question 3

Are there ethnic differences in attitude (liberal vs. conservative) toward pre-marital sex?

A One-Way Analysis of Variance was performed to ascertain the answer to this question. Results indicated significant differences across ethnic groups regarding attitudes toward pre-marital sex ($p < .05$). Scores were based on a four-unit mean score, where 1 indicated conservatism and 4 indicated liberalism. A Neuman-Keuls post-hoc procedure was then performed to identify significant differences between groups. Results indicated significant differences between three groups; Asian ($M = 2.67$, $SD = .7065$) and Haitian ($M = 2.70$, $SD = .9164$) students presented significantly different (conservative) attitudes concerning pre-marital sex than the (more liberal) White-American ($M = 3.17$, $SD = .7791$) students. Subsequent analysis regarding differences in attitude between gender by group reached significance ($p < .001$) in the White-American group. Males ($M = 3.5$, $SD = .75$) held more liberal attitudes toward pre-marital sex than their female counterparts ($M = 3.0$, $SD = .74$). No other significant differences emerged.

Research Question 4

Question 4 asked the following: Are these students sexually active? At what age do they commence sexual activity? Do they utilize contraception (condoms and other forms) and for what reason, pregnancy or STD prevention? Is there a history of pregnancy? What has been the nature of their sexual experiences (number of partners) in the past year? Lastly, is there a relationship between the number of sexual partners and the level of religiosity?

This research question is broken down into four sections. The first examines (a) whether these students are sexually active and if they are, at what age did they commence

their sexual activity; (b) contraceptive (condoms and other forms) utilization and the reasons for using contraception will be ascertained; (c) pregnancy history across the groups; and (d) the number of sexual partners that group members have had in the past year. Finally, the data are used to determine whether religiosity affects the number of sexual partners.

Regarding Question 4(a), results indicated that a higher percentage of African-American (93%) students had intercourse than any other group. A full 91% of Hispanic/Latino students had intercourse (91%); 78% of White-American students experienced intercourse. Seventy-five percent of the African-Caribbean students and 73% of those "Other" students had intercourse. The remaining Haitian and Asian groups reported the lowest overall percentages of sexual intercourse experience, 70% and 60%, respectively.

An ANOVA was performed and indicated that there were no significant differences between age of first intercourse and ethnic group. Ensuing analysis regarding age of first intercourse by gender within groups did reveal that Haitian males had first intercourse significantly ($p < .05$) at a younger age ($M = 12.63$, $SD = 2.9$) than females ($M = 17.7$, $SD = 2.1$) within their group. However, a strong caution is warranted due to the small sample size ($n = 14$) within this group.

What prompted students in this sample to engage in intercourse for the first time? Data indicate that the response endorsed with the greatest frequency was "I was in love," which reflected a total of 39.4%, followed by 38.5% responding "I was ready." A full 27.4% of the students replied that they had sex for the first time because their boyfriend/girlfriend wanted to. Just 11.4% reported that they commenced sexual activity because "all their friends were doing it." A total of 9.3% replied "other" and only 4.4% stated that

they were drunk or high at the time. Only 7 students (2.2%) reported that they were forced to have sex, and just 1 student reported having first intercourse to have a baby (see Table 6 for further information).

Chi-squared analysis was performed to identify differences between the groups in terms of the reason for initiating sex. Significant differences between groups were found for three of the offered responses: (1) "I was ready" ($p < .0001$)' (2) "Friends were doing it" ($p < .01$); and (3) "Girl/boy friend wanted to" ($p < .05$).

Chi-squared analysis indicated that differences between ethnic groups in regard to the response "I was ready" were significant ($p < .05$) between the Hispanic group and the African-American, Asian, White-American, and Other groups. A significant difference ($p < .05$) was also found between the African-Caribbean and the White-American groups.

Differences were also found between groups in regard to the response "Friends were doing it." Those differences were found between the African-American ($p < .001$), African-Caribbean ($p < .05$), Haitian ($p < .001$), and White-American groups. Significant differences ($p < .05$) were also found between the Haitian and Asian and Haitian and Other groups. In regard to the response "Boyfriend/girlfriend wanted to," significant differences ($p < .05$) were found between the African-American group and the Hispanic group. No other significant differences were found.

Table 6

Why Do Students Engage in Sexual Intercourse for the First Time? Frequencies and Valid Percentages (N=234)

| "What made you decide to have sex the first time?" | n | (%) |
|---|---|---|
| I was in love. | 128 | (39.4) |
| I was ready. | 125 | (38.5) |
| My boyfriend/girlfriend wanted to. | 89 | (27.4) |
| All my friends were doing it. | 37 | (11.4) |
| Other | 30 | (9.3) |
| I was drunk or high. | 15 | (4.4) |
| I was forced to have sex. | 7 | (2.2) |
| I wanted to have a baby. | 1 | (.3) |

Note. Percentages do not add up to 110%; respondents were encouraged to select more than one response.

the overwhelming majority of students utilized contraception to prevent pregnancy (66.3%) and prevent STDs (62.1%) and HIV (56.8%). Very few (14.8%) of the students responded that they utilized contraception at the urging of a boyfriend or girlfriend. Few (9.8%) students used contraception as a result of being told to do so by someone else. Further analysis indicated no significant differences between groups (see Table 7).

Question 4c addressed pregnancy history across all ethnic groups. The question "Is there a history of pregnancy?" was used to ascertain data. Overall, 53 females in the sample population reported having been pregnant, and a total of 16 males in the sample reported having gotten someone pregnant. Differences between groups were significant ($p < .05$). Table 8 addresses this question.

A strong caution is issued in regard to the interpretation of these results due to the small n's. Of those females that have had sex, some 60% of the Hispanic/Latino females (n=9) reported a history of pregnancy. African-Caribbean and African-American women followed closely, with 47.4% and 44.4%, respectively. White-American women, which made up the largest percentage of the sample, reported only a 17.6% incidence of pregnancy. Some 36.4% and 31.8% percent of women in the Haitian and Other category reported having a history of pregnancy. The Asian females reported no (0%) incidence of pregnancy.

Interestingly, over 50% of the Haitian males (4 of the 7who have had sex) reported being responsible for a pregnancy . This is followed by the Asian group at 40% and by the African-American group with 30%. The remaining groups reported a much lower incidence of pregnancy.

Question 4(d) specifically looks at the number of partners students had intercourse with in the past ye[redacted]"What has been the nature of their sexual experiences in the past

Table 7

Why Do Students Use Contraceptives? Differences between Groups: Frequency of Endorsement (N=224)

"Why do you use contraceptives?"

| Group* | A | B | C | D | E | F | G | Total % |
|---|---|---|---|---|---|---|---|---|
| Prevent Pregnancy | 75.0 | 52.6 | 66.7 | 40.0 | 70.0 | 78.9 | 80.8 | 12.3 |
| Prevent STDs | 70.8 | 57.9 | 83.3 | 53.3 | 55.0 | 60.5 | 53.8 | 60.3 |
| Prevent HIV/AIDS | 75.5 | 36.8 | 83.3 | 46.7 | 35.0 | 58.8 | 61.5 | 56.7 |
| Girlfriend/ boyfriends wanted me to | 16.7 | 10.5 | 16.7 | 13.3 | 5.0 | 18.4 | 23.1 | 16.5 |
| Someone told me to use it | 12.5 | 0 | 0 | 13.3 | 10.0 | 6.1 | 26.9 | 9.4 |

Note. Table entries are in terms of valid percent.

*A=African=American; B=African-Caribbean; C=Asian; D=Haitian; E=Hispanic/Latino; F=White-American; G=Other

Table 8

History of Males Responsible for and Females Experiencing Pregnancy by Ethnicity and Gender

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Males | | | |
| Group* | A | B | C | D | E | F | G |
| n | 11 | 8 | 8 | 7 | 6 | 61 | 17 |
| valid % | 30 | 0 | 40 | 51.1 | 16.7 | 8.2 | 12.5 |
| | | | | Females | | | |
| n | 20 | 20 | 3 | 18 | 17 | 94 | 24 |
| valid % | 44.4 | 47.4 | 0 | 36.4 | 60 | 17.6 | 31.8 |

*A=African-American; B=African-Caribbean; C=Asian; D=Haitian; E=Hispanic/Latino; F=White-American; G=Other.

n = Number of individuals with a pregnancy history.

year?" Of the 210 individuals who answered this question, 11% stated they had not had sexual intercourse within the past year; 48.6% stated they had sex with one partner in the past year; 16.2% reported two, 10.5% reported three, and 7.1% reported four partners in the past year. The remaining 6.7% reported four or more partners; however, no student reported 10 or more partners in the past year.

An Analysis of Variance revealed significant differences across groups in terms of total number of sexual partners in the past year ($p < .05$). The Neuman-Keuls procedure was then performed to identify where the group differences were; findings indicated that the Haitian group reported significantly more sexual partners ($M = 3.58$, $SD = 3.42$) than any other group (see Table 9). Although the ANOVA was significant, the researcher cautions the reader that the group in question (Haitian) contained few cases and contained one very high outlier.

Another ANOVA was run to ascertain whether religiosity had any influence on the number of sexual partners in the past year. The sample was separated into four groups based on self-reported levels of religiosity. The possible responses were as follows: group 1, "very religious"; group 2, "religious"; group 3, "not very religious"; and group 4, "not at all religious."

Results indicated that there were no significant differences between the four groups.

Research Question 5

Question 5 attempted to identify in which stage of change (action, action with slips/relapse, or maintenance) the students in the sample were to be found with respect to HIV and STD prevention (condom use) and pregnancy prevention (contraception use).

Table 9

Mean Number of Reported Sexual Partners in the Past Year by Ethnic Group

| Group | n | M | SD |
|---|---|---|---|
| Asian | 6 | 1.2500 | .5000 |
| Hispanic/Latino | 20 | 1.4444 | 1.38 |
| African-American | 27 | 1.6000 | 1.32 |
| African-Caribbean | 23 | 1.7222 | 1.13 |
| Other | 30 | 1.7600 | 1.33 |
| White-American | 131 | 1.8519 | 1.67 |
| Haitian | 17 | 3.5833 | 3.42 |

*$p<0.05$

+F test used to determine statistical signifance and p value

Note. Newman-Keuls procedure determined statistically significant differences between the Haitian students and all other groups.

With reference to stages of change and reported condom and contraception use, it is important to note that all findings are loosely interpreted and all suspected trends in the data are reported. This questionnaire was not developed as a formal staging instrument; however, pertinent information might be extrapolated concerning stages of change. The response of using condoms "always" was equated with the "maintenance stage," despite the limitation that no temporal indicator was associated with the question. "Most of the time" was equated with "action" and "sometimes" was equated with the "action with slips/relapse" stage.

The above responses to the question "How often do you use condoms?" were utilized to identify stage in terms of condom use. The data showed that White-Americans answered "never" (precontemplation or contemplation) with the greatest frequency (15.8%), whereas African-Caribbean and Asian students did not select this response at all. The Hispanic/Latino students selected "sometimes" (action with slips/relapse) more frequently (50%) than any other group. Few African-American students selected this response, yet chose "most of the time" (action) more frequently (41.7%) than any other group. Some 10% of the Hispanic/Latino group selected this (action) response. The majority of the groups selected the response "always" with the greatest frequency, with the exception of the African-Caribbean, Haitian, and Hispanic/Latino groups (see Table 10 for additional data).

No significant differences in reported condom use was found between groups.

Another chi-squared analysis was conducted to identify group differences in condom use among females. Findings indicated that no significant differences were found, yet there appears to be an important trend between groups as indicated by the p value of .06. All of the Asian females reported using condoms "always"; no other

Table 10

Between-Group Differences in Frequency of Condom Use (N=227)

"How often do you use condoms?"

| Group | never % | sometimes % | most of time % | always % |
|---|---|---|---|---|
| African-American (n=24) | 4.2 | 12.5 | 41.7 | 41.7 |
| African-Caribbean (n=21) | 0 | 42.9 | 28.6 | 28.6 |
| Asian (n=5) | 0 | 40 | 20 | 40 |
| Haitian (n=14) | 14.3 | 28.6 | 35.7 | 21.4 |
| Hispanic (n=20) | 5 | 50 | 10 | 35 |
| White-American (n=114) | 15.8 | 23.7 | 25.4 | 35.1 |
| Other (n=29) | 10.3 | 31 | 20.7 | 37.9 |
| TOTAL % | 11.0 | 28.2 | 26.0 | 34.8 |

Note. All entries reflect valid percents.

group responded with nearly as much frequency. More African-American females reported using condoms "most of the time" more frequently than any other group. The Haitian and Hispanic groups responded "sometimes" more than the other groups (see Table 11).

It appears that the majority of females use condoms "always." This would indicate that 33.8% of these females are in the "maintenance" stage, followed by approximately one-third (30%) of the females in the "action with slips/relapse" stage.

A parallel analysis was conducted for the males. Results indicated no significant differences among males in condom use.

In terms of stage theory, it appears that the majority of males (37%) are in the "maintenance" ("always") stage, followed by those males in the "action" ("most of the time") stage (28%), with approximately one-quarter (26%) of the males in the "action with slip/relapse" ("sometimes") stage. In terms of gender differences, it appears that more females (30%) responded that they utilized condoms "sometimes" more than the males (25%). Males (28%) tended to use condoms "most of the time" more often than the females (23%). Males utilized condoms "always" (37%) more often than their female (33%) counterparts. Thus, more males were in the "maintenance" and "action" stages and more females were in the "action with slips/relapse" stage (see Table 12).

Students (N=224) who replied that they had intercourse were asked to reply to the question, "How often do you use contraception?" Across the sample, 9.0% replied that they "never" (pre-contemplation, contemplation) used contraception, 23.8% "sometimes" (action/slips, relapse) used contraception, 28.1% used contraception "most of the time" (action), and 37.1% of the students reported using contraceptives "always" (maintenance).

The data in Table 13 show the frequency with which groups reported utilizing contraception. In response to the question "How often do you use contraception?", the

Table 11

Between-Group Differences in Frequency of Condom Use by Females (N=136)

"How often do you use condoms?"

| Group | never % | sometimes % | most of time % | always % |
|---|---|---|---|---|
| African-American (n=15) | 6.7 | 6.7 | 53.3 | 33.3 |
| African-Caribbean (n=16) | 0 | 37.5 | 37.5 | 25 |
| Asian (n=1) | 0 | 0 | 0 | 100 |
| Haitian (n=7) | 14.3 | 57.1 | 0 | 28.6 |
| Hispanic (n=14) | 7.1 | 57.1 | 7.1 | 28.6 |
| White-American (n=66) | 18.2 | 22.7 | 22.7 | 36.4 |
| Other (n=17) | 11.8 | 41.2 | 11.8 | 35.3 |
| TOTAL % | 12.5 | 30.1 | 23.5 | 33.8 |

Note. All entries reflect valid percents.

Table 12

Between-Group Differences in Frequency of Condom Use by Males (N=89)

"How often do you use condoms?"

| Group | never % | sometimes % | most of time % | always % |
|---|---|---|---|---|
| African-American (n=9) | 0 | 22.2 | 22.2 | 55.6 |
| African-Caribbean (n=5) | 0 | 60 | 0 | 40 |
| Asian (n=4) | 0 | 50 | 25 | 25 |
| Haitian (n=6) | 16.7 | 0 | 66.7 | 16.7 |
| Hispanic (n=6) | 0 | 33.3 | 16.7 | 50 |
| White-American (n=47) | 12.8 | 25.5 | 27.7 | 34 |
| Other (n=12) | 8.3 | 16.7 | 33.3 | 41.7 |
| TOTAL % | 9.0 | 25.8 | 28.1 | 37.1 |

Note. All entries reflect valid percents.

Table 13

Reported Differences in Contraception Condom Use by Ethnic Groups (N=254)

"How often do you use contraception?"

| Group | never % | sometimes % | most of time % | always % |
|---|---|---|---|---|
| African-American (n=24) | 3.7 | 11.1 | 44.4 | 40.7 |
| African-Caribbean (n=21) | 9.5 | 23.8 | 38.1 | 28.6 |
| Asian (n=5) | 16.7 | 33.3 | 16.7 | 33.3 |
| Haitian (n=14) | 18.8 | 25 | 27.5 | 18.8 |
| Hispanic (n=20) | 31.6 | 15.8 | 52.6 | 0 |
| White-American (n=114) | 6 | 12.1 | 30.2 | 51.7 |
| Other (n=29) | 6.9 | 20.7 | 20.7 | 51.7 |
| TOTAL % | 9 | 23.8 | 28.1 | 37.1 |

*A=African-American; B=African-Caribbean; C=Asian; D=Haitian; E=Hispanic/Latino; F=White-American; G=Other

African-American group reported that 3.7% "never" (pre-contemplation, contemplation) used contraception; this was the smallest value between the groups. A full 31.6% of the Hispanic/Latino group reported "never" (pre-contemplation, contemplation) utilizing contraception, making them the group most likely to report doing so.

The response "sometimes" (action with slips/relapse) was selected most often (33.3%) by the Asian group. A total of 52.6% of the Hispanic/Latino group selected "most of the time" (action), whereas 16.7% of the Asian group selected this response. Over 50% of the White-American and Other groups selected the response "always" (maintenance), whereas not one individual in the Hispanic/Latino group (0%) selected this response. It should be noted that responses to this item may also reflect condom usage, as examined in the previous research question.

Thus, it seems that the majority of White-American (52%) and Other (52%) students are in the "maintenance" stage of contraception use. The majority of African-American (44%), African-Caribbean (38%), and Haitian (38%) students are in the "action" stage. The Asian group responses indicate that one-third (33%) of its constituents are in the "action with slips/relapse" and one-third (33%) are in the "maintenance" stage. One-sixth (17%) of the group are in the "action" stage. Well over half (53%) of the Hispanic/Latino group claimed to use contraception "most of the time," thus placing its majority in the "action" stage.

Differences between groups by gender with regard to contraception use were also analyzed. This was accomplished by a comparison of group and gender means. The four possible responses were coded with a number: 1=never, 2=sometimes, 3=most of the time, 4=always. The cell means indicated mean responses by ethnicity and by gender. These values fell between 1 and 4. The total sample ($n$=254) had a mean response of $M$ = 3.08. Thus, the majority of students who were sexually active utilized contraception

"most of the time" and were classified in the "action" stage of behavior change.

Cell means by gender were as follows: females (n=151) displayed a mean of 3.14; males (n=103) displayed a mean of 2.99. This indicates that females reported utilizing contraception more often than their male counterparts. However, both males and females were considered in the "action" stage of behavior change (see Table 14 for full data).

As a group, White-Americans claimed to utilize contraception more often than any other group (M = 3.28, SD = .90); the Hispanic/Latino group followed closely behind with a group mean of 3.21 (SD = 3.21). These groups were followed by the African-American, Other, African-Caribbean, Asian, and Haitian groups.

A two-way factorial Analysis of Variance was conducted to test interaction of ethnicity and gender on contraception use. While there appears to be a trend, findings were not statistically significant.

Research Question 6

Question 6 discusses the relationship between demographic variables (sex, ethnicity, religiosity, maternal education) and attitudes towards specific sexual behaviors and sexual practices (pre-marital sexual activity, number of past sexual partners), and related issues (coercive sexual experiences).

This question focused on several possible interactions between various demographic variables that were indirectly related to the research questions. Those of statistical significance are reported.

A one-way ANOVA was performed to ascertain any significant differences

Table 14

Mean Differences in Contraception Use by Ethnic Group and Gender

| Group | Overall (n=254) | Female (n=151) | Male (n=94) |
|---|---|---|---|
| African-American | | | |
| n | 28 | 18 | 10 |
| (SD) | (.80) | (.83) | (.73) |
| M | 3.22 | 3.11 | 3.44 |
| African-Caribbean | | | |
| n | 23 | 17 | 6 |
| (SD) | (.96) | (.93) | (1.14) |
| M | 2.86 | 2.94 | 2.60 |
| Asian | | | |
| n | 9 | 6 | 3 |
| (SD) | (1.21) | (2.12) | (.96) |
| M | 2.67 | 2.50 | 2.75 |
| Haitian | | | |
| n | 19 | 10 | 9 |
| (SD) | (1.03) | (1.13) | (1.07) |
| M | 2.56 | 2.57 | 2.50 |
| Hispanic | | | |
| n | 21 | 15 | 6 |
| (SD) | (.92) | (.95) | (.84) |
| M | 3.21 | 3.08 | 3.50 |
| White-American | | | |
| n | 116 | 68 | 48 |
| (SD) | (.90) | (.86) | (.90) |
| M | 3.28 | 3.46 | 3.00 |
| Other | | | |
| n | 29 | 17 | 12 |
| (SD) | (1.0) | (1.14) | (.67) |
| M | 3.17 | 2.94 | 3.50 |

Note. Mean values based on a four-point scale, 1-4: 1=never, 2=sometimes, 3=most of time, 4=always.

between virginal and non-virginal students, and their attitudes towards pre-marital sex. The question "Pre-marital sex is morally wrong" was selected to elucidate this determination. Respondents were broken down into two groups: group 1 were non-virgins, group 2 were virgins. Responses were coded as follows: 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree. Mean scores for those non-virginal students were 3.9055 (SD = 1.0664), and for the virginal respondents, a mean of 3.2174 (SD = 1.2704) was reported. Thus, non-virginal students were more likely to disagree that pre-marital sex is morally wrong than virginal students. The difference between scores was significantly different ($p < .001$).

Maternal educational levels were used to separate the sample into three groups, and these groups were then analyzed by overall sexual attitude (conservative vs. liberal). Group 1 reflected students whose mothers had some high school or less, group 2 represented students whose mothers had a high school diploma, and group 3 consisted of those students whose mothers had specialized training or were college educated. As expected, significant differences ($p > .01$) in sexual attitude were found. Those students whose mothers had a high school education or better were more liberal than those students whose mothers had not graduated high school. The Neuman-Keuls specific comparison test showed that group 1 ($M = 3.46$, $SD = .4780$) was significantly ($p < .05$) different from group 2 ($M = 3.67$, $SD = .4069$) and group 3 ($M = 3.68$, $SD = .4155$).

Variance in mothers' education and the number of sexual partners in the past year was also found to be significant (p. >.05). The Neuman-Keuls procedure indicated that students whose mothers had some high school or less had more partners ($M = 2.1163$, $SD = 2.15$), and students whose mothers had graduated high school or whose mothers had some specialized training or college had fewer partners in the past year ($M = 1.3902$, $SD = 1.49$ and $M = 1.4196$, $SD = 1.65$, respectively).

A One-Way ANOVA looking at the number of partners in the past year and religiosity revealed no significance, yet did show an interesting trend and may in fact indicate that religiosity is a significant component in the determination of the number of sexual partners. An ANOVA between total number of partners and occurrence of forced intercourse showed no significant differences.

However, results ($p < .07$) revealed a trend that runs contrary to the current literature. Students who were forced (group 1, $n = 42$) to have intercourse at some time had less partners ($M = 1.38$, $SD = .9615$) in the past year than did those who reported having never been forced (group 2, $n = 184$) ($M = 1.89$, $SD = 1.78$) to have intercourse.

A supplementary correlation coefficients analysis was conducted to further investigate the possible relationships between gender and liberal vs. conservative sexual attitude, attitude towards pre-marital sex, number of partners in the past year, and degree of religiosity and level of maternal education. Results indicated that gender was significantly ($p < .01$) correlated to attitude towards pre-marital intercourse ($r = .16$) and number of partners in the past year ($r = .27$). No other significant correlations by gender were found.

## Conclusion

This chapter has presented the demographics, internal consistency for the questionnaire, and data analysis. In addition, this chapter has provided results concerning relationships between several demographic variables and a variety of behavioral variables. Chapter V will provide a discussion of results along with implications and recommendations for future research.

# Chapter V

# DISCUSSION, SUMMARY, AND CONCLUSIONS

In this chapter, a summary of the study is presented. This is followed by a discussion of the results of the study. Implications of the findings for the sexual knowledge, attitudes, and behaviors among urban community college students are also presented. Finally, recommendations are made regarding areas for future research.

## Review of the Purpose and Specific Objectives

The purpose of this study was to investigate the association between socio-cultural variables and sexual knowledge, attitudes, and behaviors among a culturally diverse population of metropolitan community college students. Specific objectives were set to identify differences between ethnic groups that addressed the following issues: the varying levels of knowledge concerning sexual practices and related issues (HIV, STDs, and contraception); differences in endorsement of various sources of sexual information; attitudes towards pre-marital sex (liberal vs. conservative); differences in age of first intercourse; contraception use and history of pregnancy. This investigation also included differences in stage of behavior change concerning condom and contraception use, and several other indirect but related interactions including virginal vs. non-virginal students and their attitudes towards pre-marital sex, mother's educational level, religiosity, and forced sexual experiences as related to sexual attitude and number of sexual partners. The results of the study are discussed within the context of the sample employed and the

posited research questions.

## Summary Review of the Literature

The literature pertaining to this study was presented in four specific areas and covered the following issues: non-marital sexual intercourse and its correlates and consequences; attitudes towards various sexual issues, Social Constructionist Theory and how it relates to group differences in sexual knowledge, attitudes, and behaviors; and three behavior change theories and their relation to the study population.

Three leading national research projects were identified and the results were discussed. These studies focused on the decline in the age of first intercourse over the past decade, and the fact that more adolescents are having sexual intercourse and are experiencing the consequences associated with this phenomenon. Young people engaging in pre-marital sex experience many negative health consequences as a result of their seemingly impetuous behavior. Adolescents who engage in early coitus also tend to engage in other high-risk activities that compromise their health status, such as alcohol and drug use. For example, sexually active young people are more likely to engage in serial monogamy, which increases the rates of unwanted pregnancies, incidence of sexually transmitted diseases including HIV/AIDS, and ultimately increases the incidence of debilitating disease and/or death rates for this age group. Lack of consistent and correct contraception use for early sexual initiators is a major factor in this equation. Various demographic variables other than age, like socio-economic status, parental education levels, ethnic identity, religiosity, and country of birth, help to complete the equation.

Lastly, lack of sound sexual knowledge is absent from the minds of a large majority of adolescents and young adults throughout the nation; this is due to many

factors. Inadequate or non-existent sex education creates a major gap in today's educational curriculum. This, accompanied by ineffective program development, implementation, and evaluation, is a recipe for disastrous health outcomes for a large portion of the country's population.

The importance of attitude as part of human behavior has been widely recognized. In particular, many would agree that one's attitude towards various sexual behaviors indeed shapes future endorsement or involvement with that behavior. The literature supports the notion that attitudes towards pre-marital sexual intercourse directly effects one's intention to engage or not to engage in pre-marital sexual intercourse at a young age. It appears that adolescents who report virginal status hold more conservative beliefs about sex before marriage; conversely, non-virginal adolescents hold more liberal attitudes towards this event.

Traditionally, gender differences in terms of sexual attitude have been investigated with the most fervor. The literature reveals that differences in sexual behavior between males and females are becoming less and less apparent. Only a small gap separates liberal males from liberal females, and the same goes for those conservative young people. Consistently, age and grade level have been found to be good predictors of sexual attitude. Younger (junior high school-aged) students are more conservative in their sexual attitudes, in general, than are older students (high school/college students).

In addition, variables such as religion, religiosity, parental educational attainment, and socio-economic status have been cited in the literature to be significant predictors of (liberal/conservative) sexual attitude. Adolescents coming from lower educational backgrounds reveal conservative sexual attitudes; highly religious adolescents are also more likely to hold sexually conservative attitudes. Conversely, the children of highly educated parents have more liberal sexual attitudes, as do those young people coming

from homes with high-income status.

The developers of the SKAT-A did not identify any theoretical orientation from which the instrument was developed. Thus, for purposes of this study, attempts were made to incorporate findings within the framework of Social Constructionist Theory (Focault, 1990). This theory runs counter to dominant theories that have reduced sexuality to anatomy and physiology. In sum, this theory posits that knowledge, attitudes, and behaviors concerning sexuality are prejudiced by dynamic socio-cultural conditions. True analysis of these facets, particularly between ethnically diverse groups, cannot be accomplished without reference to a myriad of variables that make up the cultural matrix in which they are imbedded. Social Constructionist Theory attempts to delimit pre/mis-conceptions and broaden our understanding of sexual attitudes, knowledge, and behaviors of an ever-changing population.

The vast differences across demographic groups in terms of various aspects of sexuality causes a dilemma from an educational standpoint. Planning a curriculum for the adolescent and young adult student is a daunting task, given the diverse nature of the population. Traditional models of education (lecture-type) have received less than favorable accolades in terms of effectiveness. However, there is an emerging educational paradigm, one that seeks to encompass the commonalities across sub-populations, that can be used to better educate our youth. These processes have been primarily utilized to help individuals with addictive drug behaviors, yet can be used with students to facilitate greater understanding and promote changes in sexual behaviors that threaten their health. The underlying premise of this paradigm is that it encourages individual involvement in the change process.

Three such strategies--Relapse Prevention (RP) (Marlatt, 1985a), Di Clemente's (1991) Stages of Change Theory, and Motivational Interviewing (MI) (Miller & Rollnick,

1991)--have been discussed and integrated with conceptualizing future educational interventions.

Relapse Prevention (RP) strives to prevent relapse or slips in behavior change. RP can help young adults and adolescents anticipate and prevent situations that may compromise successful behavior change. For example, RP can be used to help maintain consistent condom use. RP posits that changes in behavior are the responsibility of the individual and that one has the ability to do so.

Stages of Change Theory posits that a change in behavior can be accomplished if several factors of the learning process are positively influenced. Influence can come from a helping professional (teacher) that encourages individuals to change on their own terms.

Motivational Interviewing is an approach that is designed to help individuals build commitment to behavior change. MI focuses on the removal of barriers, provision of sound advice, increasing desire for change, precise goal identification, and facilitative and guiding feedback.

Collectively, these strategies can be successfully employed to help adolescents and young people change already existing behaviors or choose new behaviors that are safer. These strategies emphasize positive behavior change in a way that best suits the individual.

A synthesis of these methods and their possible applications for adolescent and young adult sexuality education have not yet been approached in other research initiatives. The author believes that when these methods are used collectively, adolescents and young people can experience behavior and lifestyle changes with unparalleled effectiveness.

## Review of the Methods

The subjects in this study were a convenience sample of 338 community college students recruited from Health and Physical Education classes. Females (61.3%) outnumbered the males (38.7%), while 43.2% were sophomores, 38.3% were freshman, 9.7% were juniors, and the remaining students were seniors or non-matriculated students.

Students were categorized and data were analyzed in terms of ethnic identification. There were seven groups: African-American, African-Caribbean, Asian, Haitian, Hispanic/Latino, White-American, and Other.

Study participants were given a measure of sexuality, namely The Sexuality Knowledge and Attitude Test for Adolescents (SKAT-A) (see Appendix A). This instrument was developed to assess knowledge and attitudes about sexuality; it also allows for examination of various sexual behaviors. A total of 125 questions make up this version of the SKAT-A which is divided into three sections. The three sections are: (1) the Attitude scale; (2) the Knowledge scale; and (3) the Behavior inventory. The Attitude section assesses issues such as masturbation, pornography, homosexuality, pre-marital sex, and abortion. A Likert-type response format is utilized.

The Knowledge section employs a true/false/not sure format and its content includes pregnancy, contraception, rape, masturbation, and sex education.

The Behavior inventory looks at age of first intercourse, number of past sexual partners, dating, contraceptive use, and various other sexual practices. The answer format varies with Likert-type, fill in, and multiple-choice.

All subjects were tested by this researcher during regularly scheduled class time. When testing occurred, both the researcher and the class instructor were required to leave the room. Before initiating the survey, all participants were asked to sign an informed

consent (see Appendix B). Both this and the completed questionnaires were deposited in separate envelopes and then into a receptacle in the classroom. All students were given the exact same version of the instrument.

## Summary of Findings

The analysis of the data revealed that differences in overall sexual knowledge between groups was statistically significant. White-American students answered more questions correctly than did the Haitian, Asian, Latino, and Other groups, but not significantly higher than the African-American students. Haitian and Asian students scored significantly lower than the Hispanic, Other, African-Caribbean, African-American, and Other groups. Data also revealed that students born in the United States had significantly higher scores in terms of overall sexual knowledge. In addition, results supported significant differences in HIV knowledge between groups. The Haitian level of HIV knowledge was significantly lower than all other groups. Data analysis revealed a significant difference in HIV knowledge between the White-American and the Other student groups. With regard to group differences in STD knowledge, the data did not reveal significant differences. However, significant differences in contraception knowledge between groups were supported by the data. Differences were found (in ascending order) between the Haitian group ($\underline{n} = 26$) and the Hispanic, African-American, African-Caribbean, and White-American student groups. Differences were also noted between the Other and the White-American groups. Subsequent analyses revealed that gender differences were significant within two of the seven groups. Female White-Americans scored significantly higher than the male White-Americans in terms of overall sexual knowledge and contraceptive knowledge. African-Caribbean females scored significantly higher with regard to contraceptive knowledge than their male counterparts.

Analysis of the relationship between ethnicity and utilization of particular sources of information indicated that all students endorsed "friends" as the most frequently utilized source of sexual information. Data revealed that this difference is significant and asserts the probability that ethnicity is related to choosing this source for sexual information. Chi-squared analysis revealed that parental sources of sexual information were also related to ethnicity. White-American and Other students are two times as likely as Haitian and Hispanic students to choose parents as a source for information concerning sex. Siblings were not found to be a significant source of sexual information. Yet between-group differences were found in terms of endorsing "other relatives" as a source of sexual information. Asian and White-American students selected this source with much less frequency than all other groups. Differences between groups in endorsing books and magazines were not found to be significant. Yet interestingly enough, the Asian group endorsed this source with much more enthusiasm than any other group. This may reflect an important trend worth investigating at a later time. The "church" was cited with the least frequency across all groups. Again, the Asian students endorsed this more often than any other group. These findings, despite their statistical insignificance, may reveal an important trend. Lastly, differences between groups in terms of endorsing Sex and Health Education classes and Other sources were not statistically significant.

The analysis of between-group differences in liberalism or conservatism towards pre-marital sex revealed significant differences between three groups. The Asian and Haitian students presented significantly different (conservative) attitudes concerning pre-marital sex, than the (more liberal) White-American students. Significant differences between genders was found only within the White-American group. White males held more liberal attitudes toward premarital sex than did the White females.

A higher percentage of African-American students had intercourse than any other group. Haitian and Asian students reported the least sexual experience. Differences between groups were not statistically significant. Similarly, differences in age of first intercourse between groups were not statistically significant, yet reflect an important trend and is worth mentioning. The Haitian student group reported the earliest age of first intercourse (14.7 years) and the Asian students reported the oldest (17.3 years). Significant gender differences were found within the Haitian group only. Haitian males had first intercourse significantly younger (12.6 years) than the females (17.7 years) in the group.

Impetus for first intercourse was significant between three of the possible seven responses. They were as follows: "I was ready," "All my friends were doing it," and "Girlfriend/Boyfriend wanted to." Differences between groups for the first response were found between the Hispanic group and the African-American, Asian, White, and Other groups, and between the African-Caribbean and White-American groups. Regarding the response "All my friends were doing it," differences were found between the African-American, African-Caribbean, Haitian, and White-American groups. Differences were also found between the Haitian and Asian groups and the Haitian and Other groups. Lastly, regarding "My girlfriend/boyfriend wanted to," significant differences were found between the African-American and Hispanic groups. Data indicate that the overwhelming majority of students utilized contraception to prevent pregnancy and prevent HIV and other STDs. Some 53 females in the sample population reported having been pregnant, and a total of 16 males in the sample reported having gotten someone pregnant. Data revealed that the Hispanic/Latino female group reported the highest incidence, with 60%. African-Caribbean and African-American women followed closely, with 47.4% and 44.4%, respectively. White-American women, which made up the

largest percentage of the sample, reported just 17.6% incidence of pregnancy. Some 36.4% and 31.8% percent of women in the Haitian and Other categories reported having a history of pregnancy. The Asian females reported no incidence of pregnancy. Over 50% of Haitian males, 40% of Asian males, and 30% of African-American males reported having been responsible for a pregnancy. Caution must be heeded in interpreting these data due to the small sample sizes.

Differences between groups regarding the number of sexual partners in the past year were statistically significant. The Haitian group reported more partners in the past year than any other group.

Analysis of Stage of Change and condom use indicated that across all groups, most students utilized condoms "always," thus placing the majority of students in the maintenance stage. In terms of contraception use, 37.1% of all students responded as "always" using contraceptives, thus placing them in the maintenance stage; 28.1% reported using contraceptives "sometimes," placing students in the action stage. Although the chi-squared statistic indicated no significant difference, it was extremely close and indicates a trend. Males indicated utilizing condoms more often than females, and conversely, women reported utilizing contraceptives more often than males.

When examining the data for other related points of interest, virginal students, when compared to non-virginal students, were shown to be significantly more conservative in their attitudes towards pre-marital sex. In addition, levels of maternal education and attitude towards pre-marital sex were significant in that those students with mothers who had less than a high school diploma had more conservative attitudes than those with mothers who had higher educational attainments. Yet those students with mothers who had less education significantly reported more sexual partners in the past year. Religiosity and number of partners in the past year were not found to be significant.

Lastly, a trend that runs counter to existing research revealed that those students who reported a history of sexual coercion had fewer partners in the past year than those without a history of sexual coercion.

## Discussion

There was a significant difference between groups in terms of overall sexual knowledge. Those students born in the United states scored higher on the sexual knowledge scale than those born elsewhere. Similar results have been found in other analyses (Soet, Dilorio, & Adame, 1997). White-American students scored significantly higher than Haitian, Asian, Latino and Other student groups. One possible explanation for these findings may be that the majority of White-American students were born in this country while those other students were not. Thus, the White-American students may have been more likely to be exposed to structured Health and Sexuality Education courses (Soet, Dilorio, & Adame, 1997).

Consistent with this interpretation, Marsiglio and Mott (1986) reported that significant differences in knowledge levels were found between students who had been exposed to sex education and those who had not. Whites were more likely to have taken a sexuality course than Blacks or Hispanics. Goodman and Cohall (1989) reported that, although the majority of students that had some type of sex education by the time they reached high school, the levels of knowledge concerning sexual practices, HIV, STDs, and contraception varied considerably between Whites and non-Whites. African-American students also scored higher in terms of overall sexual knowledge than did Haitian or Asian students, and their scores were not significantly different from those of Whites. Again, this may be explained by the fact that the African-American students tended to have been born and raised in this country.

When examining relationships between ethnic groups and levels of HIV and contraception knowledge, statistical significance was found. The Haitian group scored significantly lower on HIV knowledge. There were no significant differences across ethnic groups in STD knowledge. In terms of contraception knowledge, Haitians scored lower than all other groups. Also, the White-American group scored significantly higher than the Haitian and Other student groups. Again, this is probably due to the fact that White-American students are more likely than any other group of students to have taken a sexuality education course(s) (AGI, 1994). Gender differences with regard to overall sexual knowledge and contraceptive knowledge were significant in the White-American group, with females scoring higher in both domains. African-Caribbean females also scored higher than males with regard to contraceptive knowledge. These results are not surprising in that females tend to be more knowledgeable in terms of sexuality issues across the board, particularly with regard to contraceptives. This might be explained by the fact that women, dictated by nature, bare the brunt of preventing or allowing conception to occur, as well as dealing with consequences on an intimate level perhaps not experienced by male partners.

Several significant differences, between groups, were found in terms of utilization of particular sources of sexual information. Utilization of "friends" was found to reflect statistical probability that ethnicity is related to choosing this source for sexual information. The most probable explanation for this is that students are more apt to seek information, in general, from their peers, particularly information of such an intimate nature. Who better to seek information from than a peer who is likely to be contemplating similar behaviors? Unfortunately, it is known that peer information may be the least sound and more than likely to be incorrect. It seems likely that much of adolescent conversation is focused on the topic of dating and issues of a sexual nature.

A Chi-squared analysis revealed that utilization of "parents" as a source of sexual information was also significant. In particular, African-American students, White-American, and Other students were twice as likely to endorse this source when compared to the other groups. This pattern of behavior must be understood in the context of one's cultural identity. One possible explanation is couched in the notion that African-American adolescents are likely and encouraged to discuss sexuality issues with their parent(s), primarily their mother and, secondly, with their grandmother(s) (Noller & Callan, 1989; Tucker, 1989). A majority of this conversation is initiated by the parent. This phenomenon must be understood in terms of African-American culture and the behavioral sanctions that are currently associated with it. Females are more likely to go to their mothers, while male children will ask their fathers for information, but have also been noted to seek information from their mothers as well (Noller & Callan, 1989). Students in the "Other" group were also found to utilize parental resources significantly more so than the remaining ethnic groups.

Differences in endorsement of the source, "other relatives," were found to be significant between groups. Asian and White-American students were much less likely to ascertain sexual knowledge from this source than were students from other groups. Consistent with the research conducted by Chan (1994), it is not surprising that Asian students were unlikely to discuss sexual issues among family menbers. Perhaps this could be explained by the fact that in many Asian families, there is very little openness about discussing sex and sexual behavior. This could be attributed to traditional upbringing and the fact that sexual activity outside of marriage is strictly not sanctioned (Chan, 1994). The fact that White-American students did not endorse this source may be explained by the fact that fewer White-American students in this sample lived with extended family, living instead just with their parents and siblings. A Chi-squared

analysis of differences between groups in terms of attaining sexual information from "movies" proved to be significant. All student groups in this sample displayed relatively equal gravity in this source. In light of the fact that approximately 77% of all American households have at least one VCR, a majority of students will have seen the most popular R-rated movies--if not in the cinema, then on videocassette (Strasburger, 1995). As compared to television, movies offer more sexual innuendos, acts or references, all of which are highly explicit in nature. Thus, in the absence of widespread and consistent sex education, this medium has become a notable source of sexual information.

This study indicated that, among the sample, ethnic differences in attitude toward pre-marital sex did in fact exist. This was established by a one-way analysis of variance. A Neuman-Keuls post-hoc procedure identified significant differences between the Asian, Haitian, and White-American student groups. It was not surprising that the Asian students displayed the most conservative attitudes towards pre-marital sex. This may be explained by the fact that the majority of the Asian students consists largely of recent immigrants, who may adhere more closely to their cultural expectations of abstinence. According to Chan (1994), traditional Asian values stress conservative sexual behavior and accent the importance of not bringing shame upon the family; this notion may help to explain this finding. Soet, Dilorio, and Adame (1997) also support the notion that Asian students are more conservative than other ethnic groups with regard to pre-marital sex, sexual attitude, and sexual behavior in general. Gender differences within groups were only found in the White-American group, with White males demonstrating more liberal attitudes towards pre-marital sex. This result is consistent with the overall liberal nature of males and that of White-Americans within this sample, as presented throughout this study.

Curiously, the reported conservative attitudes of the Haitian students are surprising, given that as a group, they reported the youngest age of first intercourse (14.7 years), and that 50% of the males in this group caused a pregnancy and have had more sexual partners in the past year than any other group. These trends with a small number of subjects are non-significant. However, gender differences in age of first intercourse were found within this group alone. Haitian males exhibited a significantly younger age of first intercourse than did Haitian females. Other studies have shown that it is not uncommon that individuals engage in more permissive sexual behavior than they believe to be proper (Roche & Ramsbey, 1993).

The liberal attitudes maintained by the White-American group were not surprising. A full 78% of the White-American students had intercourse at the average age of 16 years. The conservative (17.6 years) Asian students--a group with a small number of respondents--had a mean age of first intercourse of 17.3 years.

Most important, this study found no significant differences among ethnic groups in age of first intercourse. African-American students commenced this behavior earlier than all of the other student groups. This insignificant trend was consistent with similar studies done by various researchers (AGI, 1993; Alexander et al., 1989; Goodman & Cohall, 1989; Wyatt et al., 1997).

Regarding impetus for first intercourse, the data revealed that significant differences between groups were found for three of the possible responses: "I was ready," "All my friends were doing it," and "Girlfriend/boyfriend wanted to." Differences between ethnic groups with regard to the response "I was ready" were significant between the Hispanic group and the African-American, Asian, White-American, and Other groups. Hispanics were less likely to have had first intercourse because they were "ready." A significant difference was also found between the African-Caribbean and the

White-American group, where the African-Caribbean students were also less likely to have had first intercourse because they were "ready." Differences were also found between groups with regard to the response "Friends were doing it." Those differences were found between the African-American, African-Caribbean, and Haitian groups as well as the White-American group. Significant differences were also found between the Haitian and Asian and the Haitian and Other group, where Whites, Others, and Asians were significantly less likely to have had first intercourse because "friends were doing it." With regard to the response "Girlfriend/boyfriend wanted to," significant differences were found between the African-American group and the Hispanic group, where African-Americans were more likely to have had sex for the first time at the prompting of a girlfriend/boyfriend, possibly implying that this group has difficulty with peer pressure.

Culturally-induced ideas of love and intimacy and perceptions of peer behavior may, in fact, be key aspects that must be considered when trying to understanding impetus for first intercourse. The fact that so many of the students reported being ready for first intercourse is somewhat unnerving. We might interpret these notions as adolescent feelings of invulnerability. These data suggest that educators must focus on decision-making skills and conflict-resolution strategies that would enable young students to refrain from early intercourse. The response of "All my friends were doing it" represented 11.4% of the sample population. The indication here is that many respondents have an inaccurate idea of what their peers are doing sexually. It seems that if peers are seen as a reference group, the image is a sexually active one (Roche & Ramsby, 1993). Having sexual intercourse for the first time due to the coaxing of a girlfriend/boyfriend suggests students could benefit from curriculum based on learning necessary skills to successfully negotiate peer pressure.

QUESTIONS 99-100 FEMALES ONLY
MALES SKIP TO #101

99.How old were you when you had your first period? _____ years

100.Have you ever been pregnant?

____ yes ____ no

If you answered yes, how many times? ____
If you answered yes, what happened to the baby?

Did you
____ keep the baby?
____ have an abortion?
____ give child up for adoption?
____ have a miscarriage?

QUESTION #101 FOR MALES ONLY

101.Have you ever gotten a girl pregnant?

____ yes ____ no

If you answered yes, how many times? ____
If you answered yes, what happened to the baby?

Did she
____ keep the baby?
____ have an abortion?
____ give child up for adoption?
____ have a miscarriage?

102.Have you ever visited a health care professional or clinic for any issue related to sexual activity?

____ yes ____no

Please check the box that closely applies to your answer.

| | NEVER | LESS THAN MONTHLY | MONTHLY | WEEKLY | DAILY |
|---|---|---|---|---|---|
| 118. Talking with friends about sex | ___ | ___ | ___ | ___ | ___ |
| 119. Talking with friends about contraception | ___ | ___ | ___ | ___ | ___ |
| 120. Forcing your sexual partner to have sex | ___ | ___ | ___ | ___ | ___ |
| 121. Being forced to have sex or being sexually abused | ___ | ___ | ___ | ___ | ___ |
| 122. Sexual fantasies | ___ | ___ | ___ | ___ | ___ |

123. During the past year, with how many different people have you had sex (intercourse)? _____

124. Have you ever had a sexually transmitted disease (STD)?
_____NO _____YES

If you have had a STD, please check those that you have had.

____AIDS ____Chlamydia (NGU)
____Herpes ____Gonorrhea ("clap" or "drip")
____Lice (crabs) ____Syphilis
____Other_____

125. On a scale from 1 to 10, how would you rate your views on sex? (put an X through the number that represents you best)

1 2 3 4 5 6 7 8 9 10

conservative middle of the road liberal

## BACKGROUND INFORMATION

01. Date of Birth _____/____/_____
(month)(day)(year)

02. What is your sex?
____ female ____ male

03. What is your ethnic background?
__ African American
__ African Caribbean
__ Chinese
__ Haitian
__ Hispanic/Latino
__ Japanese
__ Korean
__ Polish
__ Russian
__ White American
__ Other_____

04. What language do you speak at home?
__ English
__ Spanish
__ French/Creole
__ Korean
__ Mandarin/Cantonese
__ Japanese
__ Polish
__ Russian
__ Other_____

05. Were you born in this country?
__ yes __ no

06. If you answered no to question #5 how long have you lived in the United States?
_____years _____months

07. What grade are you in now?

| High School | College |
|---|---|
| __ freshman | __ freshman |
| __ sophomore | __ sophomore |

__ junior
__ senior

__ junior
__ senior

08. About how many days were you absent from school last year?

__ none
__ 1-5 days
__ 6-10 days
__ 11-15 days
__ 16-20
__21-25 days
__26-30 days
__31-35 days
__36-40 days
__more than 40 days

09. How many years (including this year) have you been in a American High School or College?

__ 1 year
__ 2 years
__ 3 years
__ 4 years
__ more than 4 years

10. Have you attended any other high school or college other than this one for a half a year or more?

__ yes
__ no

11. Who lives with you? CHECK ALL THAT APPLY

I Live With:

__ mother
__ father
__ stepmother
__ stepfather
__ brothers
__ sisters
__ son or daughter
__ grandparents
__ aunt(s)
__ uncle(s)
__ a guardian (not related)
__ a foster family
__ group home
__ an adoptive mother
__ an adoptive father
__ other_____

12. Answer the following questions about your father (or stepfather) only if your father (or stepfather) lives with you.

a. Is your father (stepfather) currently employed?

__ no
__ yes, he is employed as a _____
please be specific

b. What does he do on his job? _____
_____

c. If he is not currently employed, how does he receive income?

__ alimony
__ public assistance
__ other, please specify_____

d. Check the highest amount of education your father (stepfather) has COMPLETED:

__ less than 7th grade
__ junior high (8th grade)
__ some high school (9th, 10th or 11th grade)
__ high school graduate
__ specialized training after high school
__ some college ( at least one year)
__ 4 year college or university graduate
__ graduate degree

13. Answer the following questions about your mother (or stepmother) only if she lives with you.

a. Is your mother (stepmother) currently employed?

__ no
__ yes, she is employed as a _____
please be specific

b. What does she do on her job? _____
_____

c. If she is not currently employed, how does she receive income?

__ alimony
__ public assistance
__ other, please specify_____

d. Check the highest amount of education your mother (or stepmother) has COMPLETED:

__ less than 7th grade
__ junior high (8th grade)
__ some high school (9th, 10th or 11th grade)
__ high school graduate
__ specialized training after high school
__ some college ( at least one year)
__ 4 year college or university graduate
__ graduate degree

14. What is your religion? CHECK ALL THAT APPLY
__Anglican
__Baptist
__Buddhist
__Catholic
__Episcopalian
__Jehovah's Witness
__Jewish
__Lutheran
__Methodist
__Mormon
__Muslim
__Pentecostal
__Protestant
__Presbyterian
__Seventh Day Adventist
__None
__Other_____

15. Would you describe yourself as:
__ very religious
__ religious
__ not very religious
__ not religious at all

males reported this behavior. O nly 13% of the students reported "sometimes" using contraceptives, and 11% of the men and 6% of the women reporting they "never" use any contraception. When asked why they utilized condoms, 44.6% of the men and 15% of the women did so as protection against disease. Surprisingly, 43% of men and 79% of the women replied "does not apply," indicating that these students did not see a need for such protection. These results are similar to those attained in the present study; however, the students in the Pepe et al. study were more consistent in terms of condom use. Thus, more students in the latter study were in the action and maintenance stages of condom use.

## Problems and Limitations

A number of problems and limitations were encountered in the process of implementing this research study which should be considered when interpreting these data. First, all respondents participated in this study voluntarily and were selected on the basis of convenience. Students were selected from Health and Physical Education classes at a metropolitan community college. This limits the generalizability of the findings in that results may not be representative of community college students in other demographic regions.

Data for this study were acquired using a self-report instrument. Thus, the accuracy and the completeness of responses may be compromised. Due to the sensitive nature of the material in question, student anxiety regarding confidentiality was an additional concern. Assurances of anonymity were made by the researcher at the time of data collection in the hope of quelling any undue stress over this point.

All participants were English-speaking; this was an exclusionary criterion. No attempts were made to include non-English-speaking students. However, all students were matriculated in English-speaking college courses.

Data were collected only once, and no protocol was employed to assess test-retest reliability. Thus, readers are cautioned that this administration does not benefit from test-retest correlation data.

Lastly, the developers' of the SKAT-A did not identify any theoretical orientation from which the instrument was developed. For the purposes of this study, attempts were made to unite findings within the framework of Relapse Prevention Theory, Motivational Interviewing techniques, Stages of Change Theory, and Social Constructionist Theory. This should be seen as a limitation in the possible misrepresentation in how the instrument was originally conceived and how it is being interpreted in this study.

## Implications

A number of findings were derived from this study which may have practical implications for health educators and others in the area of sexuality education.

Regarding the SKAT-A tool, results of the current study support the integrity of the measure in its application for research related to adolescent and young adult sexuality. The comprehensive nature of this tool to extract information relating to knowledge, attitude, behavioral intent and actual behavior represents a major contribution to the few instruments aimed at this population.

The SKAT-A offers researchers information in several domains, thus providing a sound baseline of information from which educators can assess the needs of the population in question. By assessing levels of knowledge, attitudes (towards particular sexual behaviors), and behavioral intent, educators can implement techniques that would enable students to make better decisions and behave in ways that are safer and healthier.

Using baseline data affords practitioners a place from which to begin. In terms of stages of change theory, researchers can have a broad understanding of where the studied

population is, for example, with regard to condom and contraception use. Relapse Prevention and Motivational Interviewing techniques can then be integrated into the curriculum to move students through the stages of change toward increased compliance concerning condoms and contraceptives. This integrated approach is a necessity given the dynamic nature of today's student population.

The results from this study suggest that years in this country, or level of acculturation, or mother's educational level create particular educational needs which must be targeted if the disparity between cultural groups in our society is to be reduced. These differences must be met with sensitivity and respect and be addressed in ways that bring culturally-distinct people closer together. Although needs may vary, the vehicle to get these students to a more healthy and potentially life-saving lifestyle can be met universally.

Contemporary educational efforts need to focus on topics that allow these differences to enhance the educational experience as a whole. Topics that deal with anatomy, physiology, contraception, masturbation, rape, and pregnancy are obviously core areas. In addition to these, conflict resolution, decision-making, and communication skills must pervade future initiatives.

Attitudes and behaviors concerning sexuality are not static and are reflective of the current social impositions placed on them. Thus, increased and proper assessment of sexuality education must be completed routinely. Evaluative efforts are often left out of the education process; without it, professionals are not being truly accountable to the profession or to society at large.

## Recommendations for Further Research

The findings obtained in this study indicate that differences in sexual knowledge, attitudes, and behaviors exist between groups in this sample of culturally and ethnically

diverse students.

The study was designed as a cross-sectional survey of sexual knowledge, attitudes, and behaviors. Future research should include a longitudinal study of students to assess increased knowledge, with more years in this country or with more acculturation, as well as corresponding changes in attitudes concerning sexual topics, and progression in the stages of change toward areas like virginal (non)-status and condom and contraception use.

This study should be replicated utilizing a randomly selected sample of students in both urban and sub-urban areas. Utilizing a larger sample size might afford further breakdown of ethnic groups, including among the White-American grouping, and clarify non-significant trends among other groups (Haitian, Asian) in this sample.

One-on-one interviews and focus groups with students should be utilized to increase understanding of the subtle cultural impositions that may affect sexuality attitudes and behaviors.

Finally, future researchers should develop curricula that integrate the concepts of Relapse Prevention, Stages of Change, and Motivational Interviewing techniques, allowing students to orchestrate their own success and achievement.

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## APPENDIX A

## CONSENT FORM

I, _____, voluntarily consent to participate in a study conducted by the Department of Health and Behavior Studies of Teachers College, Columbia University.

I understand that:

1. The purpose of this study is to assess knowledge, attitudes, and behaviors about sexuality among community college students.

2. Participation is entirely voluntary and I may discontinue participation in the study at any time even though I have signed this form.

3. I may not be identified by name or in any other way, in any papers or reports of this study.

4. The information obtained from me will be treated as confidential and will not be released to any individual without my consent.

5. The data collected will be used for research purposes only, and will be analyzed and reported as group data only; no individual names and answers will be reported.

6. I may not benefit personally from the study, and the intended benefit is to develop more effective human sexuality educational programs.

7. I will be asked to complete one questionnaire and may choose not to answer any specific questions.

8. Any questions that I may have about any aspect of this study and my rights as a participant will be answered at any time during the answering of the questionnaire by the researcher Jenine DeMarzo; and she can be contacted at (516) 764-6558 for any further questions I may have in the future. Dr. Barbara Wallace of Teachers College, Columbia University, who is the sponsor of this study, may also be contacted at (212) 678-3966 for any questions about this study.

9. The whole process will take approximately 20-30 minutes. I have read and I understand this consent form and I agree to participate in this study.

Participant's signature_____ Date_____

Researcher's signature_____

PERMISSION FOR ADMINISTERING THE SKAT-A SURVEY INSTRUMENT

I _____ give permission to Jenine De Marzo to administer the SKAT-A survey instrument to class and section _____, of which I am the instructor.

I understand that this survey has been approved by the Chairman of the HPER department, Dr. S. Scherek, and by the Committee on Human Subjects at Kingsborough Community College.

Students will be asked to voluntarily participate in this research project. They will be notified by the researcher and by the instructor that their decision to or not to participate does not influence their grade in any way. Their identity will not be recorded and will remain anonymous. Both the instructor and researcher will leave the classroom during the administration of the survey.

I give Ms. De Marzo permission to administer the SKAT-A survey on the following days.

DATE TIME ROOM #

_____

_____

_____

Instructor's Signature_____Date_____

## APPENDIX B

## SEXUAL KNOWLEDGE, ATTITUDE AND BEHAVIOR SURVEY

Dear Student,

The purpose of this survey is to determine the sexual knowledge, attitudes and behavior of young people today. It has been devised so that the information you provide will be used to develop better health education materials for people like yourself.

DO NOT WRITE YOUR NAME on this survey. The answers you give will be kept private. No one will know what you write, and your answers will not affect your grade in this class. All information you provide is CONFIDENTIAL. Please answer the questions as accurately as possible.

The questions that ask about your background will only be used to describe the types of students completing this survey. The information will not be used to find out your name.

THANK YOU FOR PARTICIPATING IN THIS STUDY

MARKING INSTRUCTIONS

- you may use pen or pencil
- please check the box that applies
- erase cleanly or circle correct response
- do not talk during this survey

APPENDIX B

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THANK YOU FOR PARTICIPATING IN THIS STUDY

MARKING INSTRUCTIONS

- you may use pen or pencil
- please check the box that applies
- erase cleanly or circle correct response
- do not talk during this survey

DIRECTIONS: Below you will find a series of questions about sex. After reading each question decide the degree to which you agree or disagree. Check the box that closely applies to your answer.

SA=Strongly Agree A=Agree U=Undecided D=Disagree SD=Strongly Disagree

| | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 1. The decision about having an abortion should be made by the pregnant teenager and not by the teenager's parents or boyfriend. | — | — | — | — | — |
| 2. Boys who masturbate in a group will become homosexuals. | — | — | — | — | — |
| 3. Pornography should be banned. | — | — | — | — | — |
| 4. A woman should submit to a man's sexual demands. | — | — | — | — | — |
| 5. Abortion should be permitted whenever desired by the pregnant woman. | — | — | — | — | — |
| 6. Healthy sexually active people do not masturbate. | — | — | — | — | — |
| 7. Teenagers should have their parents permission before buying birth control. | — | — | — | — | — |
| 8. Only perverts look at pornography. | — | — | — | — | — |
| 9. Premarital sex is morally wrong. | — | — | — | — | — |
| 10. Parents should prevent their children from masturbating. | — | — | — | — | — |
| 11. Homosexuals/lesbians should be allowed to be teachers in elementary and high schools. | — | — | — | — | — |
| 12. Women should wait until they are married before having sex. | — | — | — | — | — |
| 13. Abortion is murder. | — | — | — | — | — |
| 14. It is okay for teenage females to masturbate. | — | — | — | — | — |

SA=Strongly Agree A=Agree U=Undecided D=Disagree SD=Strongly Disagree

| | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 15. Adolescents who look at pornography are more likely to rape their sexual partners. | __ | __ | __ | __ | __ |
| 16. Masturbation is unhealthy. | __ | __ | __ | __ | __ |
| 17. Homosexuals/lesbians are sick. | __ | __ | __ | __ | __ |
| 18. Abortions should only be performed in cases of rape and incest. | __ | __ | __ | __ | __ |
| 19. It is okay for male teens to masturbate. | __ | __ | __ | __ | __ |
| 20. Sex education should be required in schools. | __ | __ | __ | __ | __ |
| 21. Children should not see their parents naked. | __ | __ | __ | __ | __ |
| 22. Sex between adolescents is not okay. | __ | __ | __ | __ | __ |
| 23. It is a woman's fault if she gets raped. | __ | __ | __ | __ | __ |
| 24. Abortion is a greater evil than bringing an unwanted child into the world. | __ | __ | __ | __ | __ |
| 25. Teenagers should be encouraged to remain virgins. | __ | __ | __ | __ | __ |
| 26. Sex education courses in high school should ONLY teach teens about male/female anatomy.(the parts of the body) | __ | __ | __ | __ | __ |
| 27. All kinds of pornography are degrading to women. | __ | __ | __ | __ | __ |
| 28. Teenage females who masturbate are gay. | __ | __ | __ | __ | __ |
| 29. Homosexuals should be allowed to marry each other. | __ | __ | __ | __ | __ |
| 30. The responsibility for using birth control should be shared by both the man and woman. | __ | __ | __ | __ | __ |

Strongly=SA Agree=A Undecided=U Disagree=D Strongly=SD Disagree
Agree

| | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 31.Rape only occurs between strangers. | __ | __ | __ | __ | __ |
| 32.Birth control clinics should be located in high schools. | __ | __ | __ | __ | __ |
| 33.Teenagers who do not use birth control want to get pregnant. | __ | __ | __ | __ | __ |
| 34.Homosexuals/lesbians can be excellent parents. | __ | __ | __ | __ | __ |
| 35.Parents should encourage their teenage sons to have sex. | __ | __ | __ | __ | __ |
| 36.Parents should encourage their teenage daughters to have sex. | __ | __ | __ | __ | __ |
| 37.A pregnant teenage girl should follow the decision of her parents regarding abortion. | __ | __ | __ | __ | __ |
| 38.It is okay to force a woman to have sex even when she has said no. | __ | __ | __ | __ | __ |
| 39.Pornography should NOT be censored. | __ | __ | __ | __ | __ |
| 40.Parents should be responsible for teaching their children about sex. | __ | __ | __ | __ | __ |
| 41.It is impossible for a man to be raped. | __ | __ | __ | __ | __ |
| 42.Women should try to get as much sexual experience they can before marriage. | __ | __ | __ | __ | __ |
| 43.A child is to blame when he/she has been molested. | __ | __ | __ | __ | __ |

TRUE/FALSE QUESTIONS

DIRECTIONS; Below you will find a series of statements about sex. If you think the statement is TRUE, then circle "T". If you think the statement is FALSE, then circle "F". If there is any question of which you are NOT SURE, then circle "NS".

| | | | |
|---|---|---|---|
| 44. Feeling nervous can cause a man to have a quick orgasm and can cause a woman to have difficulty having an orgasm. | T | F | NS |
| 45. A woman can only have an orgasm if her clitoris is touched. | T | F | NS |
| 46. Teenagers are the only people who masturbate. | T | F | NS |
| 47. A man may have trouble getting an erection if he feels nervous or scared. | T | F | NS |
| 48. Male teenagers are more sexually active than female teenagers. | T | F | NS |
| 49. It is rare for a teenage boy to have sex with another boy. | T | F | NS |
| 50. A woman who has not had an orgasm is not really interested in sex. | T | F | NS |
| 51. A person who exposes himself or makes obscene phone calls will one day become a rapist. | T | F | NS |
| 52. A person who masturbates is having sexual problems with his/her sexual partner. | T | F | NS |
| 53. Many people dream at night about having sex with someone of the same sex. | T | F | NS |
| 54. A person can not like having sex with both men and women. | T | F | NS |
| 55. Most parents want schools to offer classes in sex education. | T | F | NS |
| 56. Men rape women because they want to control or humiliate them. | T | F | NS |
| 57. During sex, using a condom is the best way to avoid sexually transmitted diseases. | T | F | NS |

PLEASE CIRCLE YOUR RESPONSE

| | TRUE | FALSE | NOTSURE |
|---|---|---|---|
| 58. Dreaming about being raped means you want to be raped. | T | F | NS |
| 59. Masturbating causes mental problems. | T | F | NS |
| 60. A woman can't become pregnant during the months she breast feeds her baby. | T | F | NS |
| 61. The rhythm method (only having sex before or after a woman's period) is as safe as the pill in preventing pregnancy. | T | F | NS |
| 62. Anyone who is sexually active can get HIV/AIDS. | T | F | NS |
| 63. When a child is raped it is usually done by a stranger. | T | F | NS |
| 64. It is common for both men and women to masturbate. | T | F | NS |
| 65. Drinking alcohol increases a person's ability to have sex. | T | F | NS |
| 66. Intercourse produces a stronger orgasm for women than does masturbation. | T | F | NS |
| 67. Douching a few minutes after having sex is likely to prevent pregnancy. | T | F | NS |
| 68. A woman is not able to have as strong an orgasm as a man. | T | F | NS |
| 69. More than half of all teenagers lose their virginity by age 15. | T | F | NS |
| 70. The youngest age that MOST teenage girls can get pregnant is 12. | T | F | NS |
| 71. A woman can only get pregnant if she has an orgasm during sex. | T | F | NS |
| 72. After having one orgasm, most women have to wait 10-20 minutes to have another. | T | F | NS |
| 73. You can get a sexually transmitted disease if you kiss a person who has a sexually transmitted disease. | T | F | NS |

PLEASE CIRCLE YOUR RESPONSE

| | TRUE | FALSE | NOTSURE |
|---|---|---|---|
| 74. Condoms are the MOST WIDELY USED form of birth control by sexually active teenagers. | T | F | NS |
| 75. When teenagers have sex FOR THE FIRST TIME, the majority of them use condoms. | T | F | NS |
| 76. Six out of ten teenage girls have sexual activity with another girl. | T | F | NS |
| 77. The safest time to have an abortion is anytime until the baby is born. | T | F | NS |
| 78. Men who expose themselves in public are called exhibitionists. | T | F | NS |
| 79. Men in their 30's have less interest in having sex than when they were teenagers. | T | F | NS |
| 80. A man who wears women's clothes is called a homosexual. | T | F | NS |
| 81. The majority of girls who drop out of high school, drop out because they are pregnant. | T | F | NS |
| 82. Most teenage girls who become pregnant will have an abortion. | T | F | NS |
| 83. Parents are the major source of information about sex for teenagers. | T | F | NS |

DIRECTIONS: Below you will find a series of questions. Please provide all answers as completely as possible. n some instances you will be asked to check off more than one answer; n this case you may check all answers that apply.

84. How old were you when you went on your first date? _____years

85. From who(m) did you learn about sex? CHECK ALL THAT APPLY

| | |
|---|---|
| ____Friends | ____Parents |
| ____Brother/Sister | ____Other Relative |
| ____Books/Magazine | ____Movies |
| ____Television | ____Church |
| ____Sex Education/ Health Classes | ____Other_____ |

86. How does your sexual EXPERIENCE compare to the experience of your friends? PLEASE CHECK ONE

____ I am LESS experienced
____ I am MORE experienced
____ I have EQUAL experience

87. How does your KNOWLEDGE about sex compare to the knowledge of your friends? PLEASE CHECK ONE

____ I know LESS about sex
____ I know MORE about sex
____ I know about the SAME

88. Have you ever had sexual intercourse?

____ yes
____ no

IF YOU ANSWERED NO TO THIS QUESTION, GO TO QUESTION #93

89. How old were you when you had intercourse for the first time?

_____ years

90. Have you ever had any sexual activity with a person of the same sex as you?

____ yes
____ no

91. Have you ever been forced to have sex when you did not want to(been sexually abused) ?

____ yes  if yes at what age?____
____ no  if yes how many times? ____

92. Have you ever forced someone else to have sex when they did not want to?

____ yes  if yes at what age?____
____ no  if yes how many times?____

93. If you have NEVER had sexual intercourse, why haven't you? PLEASE CHECK ALL THAT APPLY

____ I don't want to.
____ Religious beliefs.
____ Nobody wants to have sex with me.
____ I am not ready.
____ I can't get birth control.
____ Pressure from my parents to wait.
____ Pressure from my friends to wait.
____ Other_____

94. If you have had sexual intercourse, what made you decide to have sex the first time? PLEASE CHECK ALL THAT APPLY

____ I was ready.
____ I was in love.
____ All my friends were having sexual intercourse.
____ I was drunk or high.
____ My girlfriend/boyfriend wanted to.
____ I was forced to have sex.
____ I wanted to have a baby.
____ Other_____

95. How often do you use contraception? (Pill, condoms, etc.)

_____ never
_____ sometimes
_____ most of the time
_____ always

IF YOU ANSWERED NEVER, SOMETIMES, OR MOST OF THE TIME, why don't you use it every time? PLEASE CHECK ALL THAT APPLY

____ not important to me
____ can't afford it
____ don't want parents to find out
____ don't know where to get it
____ embarrassed to ask for it or buy it at the store
____ don't know how to talk about it with my boy/girlfriend
____ don't like to use it
____ my girl/boy friend doesn't like to use it
____ against religious beliefs
____ sometimes I don't have any with me
____ don't know how to use it
____ don't know which one to use
____ don't want to interrupt sex
____ other_____

IF YOU ANSWERED SOMETIMES, MOST OF THE TIME OR ALWAYS, why DO you use contraception ?

____ want to prevent pregnancy
____ want to prevent getting a sexually transmitted disease
____ want to prevent getting HIV/AIDS
____ my girl/boy friend wanted me to
____ someone told me to use it

96.How often do you use condoms?

____ never
____ sometimes
____ most of the time
____ always

IF YOU ANSWERED SOMETIMES, MOST OF THE TIME OR ALWAYS, why DO you use contraception? CHECK ALL THAT APPLY

____ want to prevent pregnancy
____ want to prevent getting a sexually transmitted disease
____ want to prevent getting HIV/AIDS
____ my girl/boy friend wanted me to
____ someone told me to use it

IF YOU ANSWERED NEVER, SOMETIMES, OR MOST OF THE TIME, why don't you use it every time? PLEASE CHECK ALL THAT APPLY

____ not important to me
____ can't afford it
____ don't want parents to find out
____ don't know where to get it
____ embarrassed to ask for it or buy it at the store
____ don't know how to talk about it to my boy/girlfriend
____ don't like to use it
____ my girl/boy friend doesn't like to use it
____ against religious beliefs
____ sometimes I don't have any with me
____ don't know how to use it
____ don't know which one to use
____ don't want to interrupt sex
____ other_____

97. If you had a choice, what type of birth control method would you LIKE TO USE or have your girl/boyfriend use? PLEASE CHECK ALL THAT APPLY

____ IUD ____ Norplant ____ The Pill

____ Withdrawal ____ Rhythm Method ____ Condoms

____ Foam or Jelly ____ Douche ____ Diaphragm

____ Depo-Provera

____ I don't like to use any form of birth control.

98. DURING THE PAST MONTH which of the following birth control methods have you or your girl/boyfriend ACTUALLY USED? PLEASE CHECK ALL THAT APPLY

____ IUD ____ Norplant ____ The Pill

____ Withdrawal ____ Rhythm Method ____ Condoms

____ Foam or Jelly ____ Douche ____ Diaphragm

____ Depo-Provera ____ None

QUESTIONS 99-100 FEMALES ONLY
MALES SKIP TO #101

99.How old were you when you had your first period? _____ years

100.Have you ever been pregnant?

____ yes ____ no

If you answered yes, how many times? ____
If you answered yes, what happened to the baby?

Did you
____ keep the baby?
____ have an abortion?
____ give child up for adoption?
____ have a miscarriage?

QUESTION #101 FOR MALES ONLY

101.Have you ever gotten a girl pregnant?

____ yes ____ no

If you answered yes, how many times? ____
If you answered yes, what happened to the baby?

Did she
____ keep the baby?
____ have an abortion?
____ give child up for adoption?
____ have a miscarriage?

102.Have you ever visited a health care professional or clinic for any issue related to sexual activity?

____ yes ____no

HOW OFTEN HAVE YOU HAD THE FOLLOWING EXPERIENCES WITHIN THE LAST YEAR? Please check the box that closely applies to your answer

| | NEVER | LESS THAN MONTHLY | MONTHLY | WEEKLY | DAILY |
|---|---|---|---|---|---|
| 103. Dating (going to dinner, movie, party with girl/ boyfriend | ___ | ___ | ___ | ___ | ___ |
| 104. Going home with a stranger you met at a party or bar | ___ | ___ | ___ | ___ | ___ |
| 105. Go on a date with a group of friends | ___ | ___ | ___ | ___ | ___ |
| 106. Kissing while on a date | ___ | ___ | ___ | ___ | ___ |
| 107. Petting or fondling (not oral sex) | ___ | ___ | ___ | ___ | ___ |
| 108. Oral sex | ___ | ___ | ___ | ___ | ___ |
| 109. Sexual intercourse with a person of OPPOSITE sex | ___ | ___ | ___ | ___ | ___ |
| 110. Sexual activity with a person of SAME sex | ___ | ___ | ___ | ___ | ___ |
| 111. Masturbating alone | ___ | ___ | ___ | ___ | ___ |
| 112. Viewing a pornographic movie/video | ___ | ___ | ___ | ___ | ___ |
| 113. Reading a pornographic magazine | ___ | ___ | ___ | ___ | ___ |
| 114. Talking with your parents about sex | ___ | ___ | ___ | ___ | ___ |
| 115. Talking with your parents about contraception | ___ | ___ | ___ | ___ | ___ |
| 116. Talking with your girl/ boyfriend about sex | ___ | ___ | ___ | ___ | ___ |
| 117. Talking with your girl/ boyfriend about contraception | ___ | ___ | ___ | ___ | ___ |

Please check the box that closely applies to your answer.

| | NEVER | LESS THAN MONTHLY | MONTHLY | WEEKLY | DAILY |
|---|---|---|---|---|---|
| 118. Talking with friends about sex | ___ | ___ | ___ | ___ | ___ |
| 119. Talking with friends about contraception | ___ | ___ | ___ | ___ | ___ |
| 120. Forcing your sexual partner to have sex | ___ | ___ | ___ | ___ | ___ |
| 121. Being forced to have sex or being sexually abused | ___ | ___ | ___ | ___ | ___ |
| 122. Sexual fantasies | ___ | ___ | ___ | ___ | ___ |

123. During the past year, with how many different people have you had sex (intercourse)? _____

124. Have you ever had a sexually transmitted disease (STD)?
_____NO _____YES

If you have had a STD, please check those that you have had.

____AIDS ____Chlamydia (NGU)
____Herpes ____Gonorrhea ("clap" or "drip")
____Lice (crabs) ____Syphilis
____Other_____

125. On a scale from 1 to 10, how would you rate your views on sex? (put an X through the number that represents you best)

1 2 3 4 5 6 7 8 9 10

conservative middle of the road liberal

## BACKGROUND INFORMATION

01. Date of Birth _____/____/_____
(month)(day)(year)

02. What is your sex?
____ female ____ male

03. What is your ethnic background?
__ African American
__ African Caribbean
__ Chinese
__ Haitian
__ Hispanic/Latino
__ Japanese
__ Korean
__ Polish
__ Russian
__ White American
__ Other_____

04. What language do you speak at home?
__ English
__ Spanish
__ French/Creole
__ Korean
__ Mandarin/Cantonese
__ Japanese
__ Polish
__ Russian
__ Other_____

05. Were you born in this country?
__ yes __ no

06. If you answered no to question #5 how long have you lived in the United States?
_____years _____months

07. What grade are you in now?

| High School | College |
|---|---|
| __ freshman | __ freshman |
| __ sophomore | __ sophomore |

__ junior
__ senior

__ junior
__ senior

08. About how many days were you absent from school last year?

__ none
__ 1-5 days
__ 6-10 days
__ 11-15 days
__ 16-20
__21-25 days
__26-30 days
__31-35 days
__36-40 days
__more than 40 days

09. How many years (including this year) have you been in a American High School or College?

__ 1 year
__ 2 years
__ 3 years
__ 4 years
__ more than 4 years

10. Have you attended any other high school or college other than this one for a half a year or more?

__ yes
__ no

11. Who lives with you? CHECK ALL THAT APPLY

I Live With:

__ mother
__ father
__ stepmother
__ stepfather
__ brothers
__ sisters
__ son or daughter
__ grandparents
__ aunt(s)
__ uncle(s)
__ a guardian (not related)
__ a foster family
__ group home
__ an adoptive mother
__ an adoptive father
__ other_____

12. Answer the following questions about your father (or stepfather) only if your father (or stepfather) lives with you.

a. Is your father (stepfather) currently employed?

__ no
__ yes, he is employed as a _____
please be specific

b. What does he do on his job? _____
_____

c. If he is not currently employed, how does he receive income?

__ alimony
__ public assistance
__ other, please specify_____

d. Check the highest amount of education your father (stepfather) has COMPLETED:

__ less than 7th grade
__ junior high (8th grade)
__ some high school (9th, 10th or 11th grade)
__ high school graduate
__ specialized training after high school
__ some college ( at least one year)
__ 4 year college or university graduate
__ graduate degree

13. Answer the following questions about your mother (or stepmother) only if she lives with you.

a. Is your mother (stepmother) currently employed?

__ no
__ yes, she is employed as a _____
please be specific

b. What does she do on her job? _____
_____

c. If she is not currently employed, how does she receive income?

__ alimony
__ public assistance
__ other, please specify_____

d. Check the highest amount of education your mother (or stepmother) has COMPLETED:

__ less than 7th grade
__ junior high (8th grade)
__ some high school (9th, 10th or 11th grade)
__ high school graduate
__ specialized training after high school
__ some college ( at least one year)
__ 4 year college or university graduate
__ graduate degree

14. What is your religion? CHECK ALL THAT APPLY
__Anglican
__Baptist
__Buddhist
__Catholic
__Episcopalian
__Jehovah's Witness
__Jewish
__Lutheran
__Methodist
__Mormon
__Muslim
__Pentecostal
__Protestant
__Presbyterian
__Seventh Day Adventist
__None
__Other_____

15. Would you describe yourself as:
__ very religious
__ religious
__ not very religious
__ not religious at all